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Abstract

The everyday and events: Understanding risk perceptions and resilience in urban Nepal

Hanna A. Ruszczyk

This thesis argues for a broader and deeper understanding of urban risk perception and resilience in under researched, ordinary medium sized cities of the world such as Bharatpur, Nepal. A detailed intra urban comparison of a core urban ward and a rapidly urbanising ward provide a conceptual and methodological tool showcasing a complex risk landscape as perceived by residents. In the everyday, respondents perceive a range of risks including economic security and physical infrastructure. Through participation in informal governance structures (women's groups and neighbourhood groups), some residents are addressing urban risk in the everyday. Women's groups are a form of informal urban social, economic and environmental resilient infrastructure while neighbourhood groups are allowed to do more, thus reworking the urban to address their perceived risks. Bharatpur, Nepal provides an opportunity to learn from its inhabitants: what the urban "we" perceive as risks, how the urban "we" enact resilience and or rework the urban as well as how they attempt to create and influence a future that is of benefit to them and their communities.

Two events lead to a changing risk environment for residents and the local authority. The change in administrative status (from a municipality to a sub metropolitan city) and the devastating Gorkha earthquake highlight the complexity of risk perceptions and practices shaping people's response to risky events. Through these events, risk for poorer, marginalised residents is being accumulated and responses to perceived risk may need to be reworked by informal organisations that currently have power in the city. Through the lens of these two events as well as the everyday, the role of the local authority is viewed as a particularly important form of risk governance in the city. The local authority manages the informality of risk governance space allowing some groups of residents to address their perceived risks while excluding segments of society.

The international aid community's ambivalence towards the problematic resilience discourse framing their work is also made visible in this research. The international aid community of Nepal is utilising disaster community resilience in two distinct ways: as a bridging mechanism for their siloed work and as a project management tool of the donors to manage practitioners. The resilience lens ignores urban residents' perceptions of risk and power dynamics in society. This results in an assumption that "communities" can become resilient. The overarching contribution of this research is the linking of disaster and urban studies of ordinary medium sized cities through the concepts of risk perceptions, resilience, community and a multi scale analysis leading to insights of relevance for theory, policy and practice. This research argues to de-privilege disasters and a conceptual space is created for engaging through time and space with a broader interpretation of urban risk and urban resilience as perceived by actors from the local to the national and to the international scale.

**The Everyday and Events:
Understanding Risk Perceptions and
Resilience in Urban Nepal**

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Thesis submitted for the degree of Doctor of Philosophy

Department of Geography

Durham University

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Summary Contents

Chapter 1 - Introduction

Chapter 2 - Framing risk, informality and resilience in a city

Chapter 3 - Exploration

Chapter 4 - Learning about risk perceptions in the city

Chapter 5 - The urban 'we' in the everyday

Chapter 6 - Events and a changing urban risk environment

Chapter 7 - Resilience lens ignores risk perceptions

Chapter 8 - Conclusion

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Table of Contents

List of Figures.....	10
List of Tables	11
Abbreviations	12
Statement of Copyright	14
Acknowledgements	15
Dedication	17
Chapter 1 Introduction	18
1.1 An earthquake and a city.....	18
1.2 The research.....	19
1.2.1 Research aim and questions	19
1.2.2 Strategic context for the research.....	20
1.3 Key concepts utilised	22
1.4 Research contribution	23
1.5 Structure of the thesis.....	25
Chapter 2 Framing risk, informality and resilience in a city	29
2.1 Relevance of literatures to my research	29
2.2 The resilience lens.....	29
2.2.1 Resilience in DRR and climate change discourses	31
2.2.2 Making the most of resilience.....	33
2.2.3 Operationalising resilience	34
2.2.4 Resilience bridges silos.....	37
2.3 Community resilience and power	39
2.3.1 Community	39
2.3.2 Community resilience and the masking of power relations.....	41
2.3.3 Multi scales and community resilience.....	43
2.4. Learning about the ordinary medium sized city	44
2.4.1 Reframing the urban debate	45
2.4.2 Conceptualising an urban majority's everyday	48
2.4.3 The everyday and livelihoods	49
2.5 Urban informality.....	52
2.5.1 Informality of people in the everyday.....	53
2.5.2 Informality of government.....	54
2.5.3 Governing legibility of the urban.....	56
2.6 Cities as landscapes of risk	58

2.6.1 Social construction of risk perceptions	59
2.6.2 Risky events	60
2.6.3 Hazards and disasters	61
2.6.4 Understanding the risk context	63
2.6.5 Multi scalar urban governance and disasters	65
2.7 Conclusion	67
Chapter 3 Exploration	70
3.1 Introduction	70
3.2 Location of the research - Nepal	70
3.2.1 Nepal's economic security through remittances	73
3.2.2 The last decade	74
3.2.3 Bharatpur	76
3.2.4 Bharatpur's economy and development	77
3.3 Structuring the research	80
3.3.1 Research partners	80
3.3.2 Process of selecting fieldwork location	82
3.3.3 Intra-urban comparison	83
3.4 Respondents	90
3.4.1 Respondents on various scales	91
3.4.2 Process of identifying respondents in wards 4 and 11	93
3.4.3 Engaging with respondents	94
3.4.4 Choice of terminology	95
3.5 Research in practice	98
3.5.1 Gaining consent	98
3.5.2 Gatekeepers and research assistants	99
3.6 Methods	101
3.6.1 Semi-structured interviews	101
3.6.2 Focus groups	104
3.6.3 Photography	105
3.6.4 Other methods	107
3.6.5 Analysis and understanding different scales	108
3.7 Positionality	109
3.7.1 Identity	110
3.7.2 Power and ethics	112
3.8 Reflections	114
3.8.1 Evolution of research project	115
3.8.2 Reciprocity and learning	117
3.9 Conclusion	119

Chapter 4 Learning about risk perceptions in the city	121
4.1 Learning about the city through its residents	121
4.2 Description of selected respondents.....	122
4.2.1 Ward 4 respondents	124
4.2.2 Ward 11 respondents	127
4.3 Seeing everyday risk for the family	131
4.3.1 Perception of everyday risk in wards 4 and 11	132
4.3.2 Economic insecurity is the key risk perceived.....	134
4.3.3 Hope for the future through education.....	137
4.3.4 Home ownership	138
4.4 Perceiving urban risks on other scales	140
4.4.1 Perceiving cities as landscapes of risk.....	140
4.4.2 Local stakeholders perceptions of urban risk	142
4.4.3 Earthquakes and control.....	143
4.5 Necessity to link everyday perception of risks and natural hazards	145
4.5.1 Natural hazards are not the priority	145
4.5.2 Hierarchy of risks.....	147
4.6 Conclusion	149
Chapter 5 The urban ‘we’ in the everyday.....	151
5.1 The urban ‘we’	151
5.2 Informal groups of ‘we’	152
5.2.1 UNDP and tole level organisations.....	152
5.2.2 UNDP and INGO established older TLOs	153
5.2.3 Self organised TLOs	156
5.2.4 Bharatpur’s women’s groups	159
5.3 Community resilience or reworking the urban	162
5.3.1 Women’s groups as resilient urban infrastructure	162
5.3.2 “Being in the shade” and invisible.....	165
5.3.3 TLOs rework the urban.....	166
5.4 Urban infrastructure in a gray space	168
5.4.1 Physical infrastructure	169
5.4.2 Informal financial infrastructure	171
5.4.3 Environmental and social infrastructure	173
5.5 Governing through acknowledgement and visibility	174
5.5.1 Forms of community.....	175
5.5.2 Acknowledged by the government	176
5.5.3 Local authority manages the gray space	178
5.5.4 The excluded residents.....	180
5.6 Conclusion	181

Chapter 6 Events and a changing urban risk environment.....	183
6.1 Changing perceptions of risk	183
6.2 Events.....	183
6.2.1 Events in Bharatpur	184
6.3 Change of local government status	187
6.3.1 Sub Metropolitan City of Bharatpur impacts risk perception of the city..	188
6.3.2 Risk accumulates through economic stress and diminishing influence....	191
6.4 The Gorkha Earthquake	193
6.4.1 Risk hierarchy and the earthquake.....	195
6.4.2 The Gorkha Earthquake reinforces everyday marginalisation.....	197
6.5 What the earthquake allowed to happen	199
6.5.1 Local authority struggles with decentralisation and lack of resources	201
6.5.2 TLOs need to learn new responses to perceived urban risk	205
6.5.3 Earthquake resistant construction is a financial risk for Mangalpur's poorer residents.....	208
6.5.4 Accumulation of urban risk	209
6.6 Conclusion	212
Chapter 7 Resilience lens ignores risk perceptions.....	214
7.1 Resilience in Nepal	214
7.2 How the international aid community utilises the resilience lens.....	215
7.2.1 Resilience as a bridging concept.....	216
7.2.2 IAC's project management tools: 'resilience' and 'community'	219
7.2.3 The mythical urban resilient community in Nepal	224
7.3 Resilience as a critique of development.....	228
7.3.1 "Retrofitting development".....	228
7.3.2 Whose priorities matter in Nepal	231
7.4 Considerations for a safe urban future	233
7.4.1 Being safe in the city	235
7.4.2 Cities, people and resilience: retaining promise	237
7.5 Conclusion	239
Chapter 8 Conclusion	240
8.1 Introduction.....	240
8.2 Research findings and contributions	241
8.3 Evaluating approach taken.....	247
8.4 Looking into the future	248
References.....	253

Appendices.....	275
Appendix A Profile of respondents to NSET’s BCIPN Risk Perception Survey ..	276
Appendix B Difficulties encountered with utilising the BCIPN Survey	278
Appendix C Demographics of the 23 key respondents in wards 4 and 11	279
Appendix D Description of the 23 key respondents from wards 4 and 11	280
Appendix E Interviews conducted during the five fieldwork trips.....	282
Appendix F Questions asked during the five fieldwork trips	289
Appendix G Consent Form	309
Appendix H 23 key informants, description and location in city	312
Appendix I Codes hierarchy future, December 2015	313
Appendix J Codes hierarchy everyday risks, February 2016	314
Appendix K My blogs post earthquake	315

List of Figures

Chapter 2 Framing risk, informality and resilience in a city

Figure 2.1: Schematic diagram of the evolution of ‘resilience’ (Source: Alexander 2013, 2714)

Figure 2.2: Conceptual framework for doctoral research

Chapter 3 Exploration

Figure 3.1: Map of Nepal (Source: Petley et al 2007, 25)

Figure 3.2: Nepal Road Network (Source: WFP, 2013)

Figure 3.3: Nepal’s east-west motorway bisects Bharatpur

Figure 3.4: Bharatpur wards

Figure 3.5: Urban ward 4

Figure 3.6: Rapidly urbanising ward 11

Figure 3.7: Rural Mangalpur

Figure 3.8: Resources to discuss “what will keep you safe for the future?”

Figure 3.9: Everyday worries

Chapter 4 Learning about risk perceptions in the city

Figure 4.1: Ward 4 respondents: Hari Prasad, Nani Maya, Rita Devi and Alam

Figure 4.2: Ward 11 respondents: Shankar, Laxmi and Prem, Narayan

Figure 4.3: Cannon’s risk hierarchy (2014b, 68)

Chapter 6 Events and a changing urban risk environment

Figure 6.1: Epicenters and intensity of 25th April 2015 Earthquake (Source: USAID, 2015)

List of Tables

Chapter 3 Exploration

Table 3.1: Comparing wards 4 and 11

Table 3.2: Timing and types of questions asked respondents in wards 4 and 11

Chapter 4 Learning about risk perceptions in the city

Table 4.1: Everyday risk perceptions for respondents and their families

Chapter 5 The urban ‘we’ in the everyday

Table 5.1: Changes in 2014 – 2015 according to the Citizens Village Tole President

Chapter 6 Events and a changing urban risk environment

Table 6.1: Change in respondents’ perceptions of risk

Abbreviations

ADB	Asian Development Bank
BCIPN	Building Code Implementation Program of Nepal
CBDRR	Community Based Disaster Risk Reduction
CBS	Center Bureau of Statistics
CCA	Climate change adaptation
CEO	Chief executive officer
CVTP	Citizens Village Tole President
DFID	Department for International Development
DRR	Disaster Risk Reduction
EU	European Union
EwF	Earthquakes without Frontiers
HFA	Hyogo Framework for Action
IAC	International Aid Community
IFAD	International Fund for Agricultural Development
IFRC	International Federation of Red Cross
IFRCRCS	International Federation of Red Cross and Red Crescent Societies
IHRR	Institute for Hazard, Risk and Resilience
INGO	International Non Governmental Organisation
KV	Kathmandu Valley
MCs	Minimum Characteristics
MDG	Millennium Development Goals
MoFALD	Ministry of Federal Affairs and Local Development
NBC	National Building Code
NGO	Non Governmental Organisation
NRRC	Nepal Risk Reduction Consortium
NSET	National Society for Earthquake Technology - Nepal
NSSW	Nepal School of Social Work
ODI	Overseas Development Institute
OED	Oxford English Dictionary
PhD	Doctor of Philosophy
RGS-IBG	Royal Geographical Society with the Institute of British Geographers
SMC	Sub metropolitan city
SMCB	Sub metropolitan city of Bharatpur
TLO	Tole Level Organisation

TDC	Tole Development Committee
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNISDR	United Nations Office for Disaster Risk Reduction
UN/ISDR	United Nations Inter-Agency Secretariat of the International Strategy for Disaster Reduction
USA	United States of America
USAID	United States Agency for International Development
VDC	Village Development Committee
WFP	World Food Programme

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Dedication

To James and Julian, you are my sunshine

Chapter 1 Introduction

1.1 An earthquake and a city

The funding guidelines for the PhD steered the research to have a practical application in the global South, in a country which had exposure to natural hazards and this overlapped with my interest in a policy relevant study. My initial research title was "Earthquakes and community resilience: From debate to practical application in urban settings". The initial research aim was to address a gap in how resilience is understood in the urban context and to assess if resilience can be operationalised. I had hoped to create a set of disaster resilient community characteristics for the urban setting in Nepal. This changed after I started the fieldwork. After the first fieldwork trip to Bharatpur, Nepal it was clear that natural hazards were not a perceived priority risk for Bharatpur's residents thus this changed the focus and direction of my research.

During my second field visit to Bharatpur city, in central Nepal I experienced an earthquake. On the 25 April 2015, I was walking along a commercial street in ward 4, one of my fieldwork sites, when the ground started shaking. I could not believe that the much anticipated earthquake – at least in the context of the international humanitarian and development community - was happening. I was evacuated from Nepal and did not collect all the empirical research I had hoped for. The Gorkha earthquake, as it became known, killed 8,856 people and injured 22,309 more, destroyed in excess of 600,000 homes, and damaged almost 300,000 in the hill districts of west-central Nepal (GofN, Ministry of Home Affairs et al, 2015). The epicenter of the earthquake was in Gorkha District, 60 km north of Bharatpur. Fortunately, Bharatpur was not in the direction of shaking and was largely unaffected (Hand, 2015). However, a high magnitude aftershock on May 12th damaged approximately 300 buildings and destroyed 100 in Bharatpur. I returned almost five months later with the aim of understanding if and how the earthquake had altered local perceptions of risk in my intra-urban comparison wards.

1.2 The research

New insights into the scale and nature of urban risk are needed (Ziervogel et al, 2017; Dodman et al, 2013; Bull-Kamanga et al, 2003). When this research was initiated, I attempted to understand urban risk perceptions of hazards especially the infrequent but high magnitude earthquakes in Nepal. Oven and Rigg (2015, 705) in their investigation of landslides and tsunamis, suggest, “our object of attention is the point and immediate surroundings of an event, be it a landslide, tsunami or earthquake. But both the production of risk in the first place and the human impacts in the aftermath of an event make subtle traces to other” geographical realities. These links to other risks and realities warrant further consideration. Researching natural hazards without understanding how and why people live their lives in the everyday leads to a narrative that does not adequately reflect rapidly urbanising cities where perceptions of risk can take different forms. This grounding in the everyday gives us clues to limitations and possibilities for the future as well as how urban residents cope with and possibly prepare for the future.

1.2.1 Research aim and questions

This research aims to understand the relationship between the everyday and two events (change in municipal status and the Gorkha earthquake) by exploring the changing risk perceptions, priorities and actions taken by urban residents in two wards of comparison in a rapidly urbanising city. I also aim to reflect on how the concept of resilience is being utilised by the international aid community in Nepal’s urban context.

In order to address this aim, four research questions were examined:

1. What are the risk perceptions of residents in the city?
2. How do residents address their perceived risks?
3. How do residents perceive the urban risk environment when events occur?
4. How do international aid agencies understand urban risk and resilience in Nepal and to what extent do these understandings reflect the everyday lives and needs of urban residents?

1.2.2 Strategic context for the research

According to the Overseas Development Institute (ODI), by 2030 there will be 11 countries with a high number of people living in poverty, overlain with high multi-hazard exposure and inadequate capacity to reduce the risks faced; Nepal is one of these countries (Shepherd et al, 2013). Nepal “remains one of the world’s 48 ‘least’ developed countries, and 37 per cent of the population live on less than \$1.51 a day (ADB, 2014), even after more than sixty years of ‘development’” (Rigg et al 2016, 64). Within a dramatically changing landscape where Nepal is transforming from a rural to an urban-based country (Muzzini et al, 2013), the local authorities are increasingly being forced by the central government and the international aid community to implement both development and disaster risk reduction efforts (Jones et al, 2014). This is occurring in an environment where the local authorities have received little training and minimal technical and human resources from the central government they represent.

Bharatpur is a city of 200,000 people located near to the Nepal-India border in Chitwan District and can be considered indicative of where and how people live in rapidly urbanising Asia. Cities such as Bharatpur are where projected global population growth will be, in urban centers with less than half a million inhabitants (Dodman et al, 2013). Bharatpur is an ordinary city (Robinson, 2006) without any particular claim to fame. Ordinary cities of this size are where most urban dwellers live. These cities face a number of challenges including significant inward migration resulting in rapid urbanisation, limited, if any, urban planning, insecure livelihoods, changing social networks, lack of regular electricity provision and lack of solid waste management thus reflecting the difficulties of urban life (Mitlin and Satterthwaite, 2013). Urban life in the ‘ordinary city’ as a practice is shaped by individuals who engage with each other and the government “through a range of alternative imaginaries and practices of participation, self-reliance, autonomy, diversity, subaltern communities and knowledges, differences and specificities” (Peake and Rieker 2013, 3).

This research takes a qualitative comparative approach (McFarlane, 2011) to investigate changes in risk perception and coping strategies in Bharatpur over a 12

month period between November 2014 – October 2015. During the period of this study, a number of changes were observed and experienced in Nepal. The number of municipalities in Nepal increased by 275% creating an urban country at least in name, a devastating earthquake struck and the constituent assembly promulgated a new constitution after deliberating for seven years. To date, disaster studies have been largely biased towards rural locations or large / mega cities, while urban studies has largely focused on mega cities or informal settlements (Dodman et al, 2013, Robinson, 2006). This research focuses on the often overlooked medium-sized cities of the global South (Sou, 2014).

There is a large body of research on large-scale, rapid onset, high impact natural hazard events such as earthquakes or volcanoes (Wisner et al, 2012a, Wisner et al, 2004). More recently a number of researchers are exploring chronic events that cumulatively can have a significant impact at the local (household) level (Wamsler and Brink, 2014; Sou, 2014; Dodman et al, 2013; Bul-Kamanga et al, 2003). This research sits between the two. A rapid onset hazard event is discussed in this research but only as part of a broader understanding of risk perception from the perspective of urban residents. A connection is being made between how residents' views of high impact events are intimately connected to everyday perceived risks. The interlinkage between culture and risk highlights the need to pay “more attention to people's own priorities, perceptions and belief systems” in relation to everyday risks and hazard events (Bankoff et al 2015, 11).

This research will show how events, which occur beyond the household and community scale and have wide reach (spatially and temporally), impact people's risk perception and their lives in the everyday in wards 4 and 11. Risk perceptions are explored and the interconnectedness between the everyday and events is explored. The opinions of public sector officials at the local and central government level are considered in relation to their perception of hazards and risks, the role of government in the everyday and when events occur and also their understandings of resilience. It is within this environment of rapid change, that I investigate the concept of resilience. The contested and problematic concept of resilience warrants reflection in the discourse utilised by the international aid community. They utilise

resilience in relation to communities and disasters with the aim of building the capacity of people to withstand earthquakes and other hazards such as floods. How the resilience discourse is enacted in Nepal and what significance it has for disaster preparedness and urban risk reduction requires analysis. “Asking questions about ‘whose resilience’ and ‘whose city?’ can contribute usefully to efforts to improve the living conditions in stressed and distressed urban areas” (Vale 2014, 200). This view of whose resilience and whose city with an acknowledgement of power does not reflect the current situation in the discourse driven by external actors in Nepal.

1.3 Key concepts utilised

The key conceptual frameworks underpinning this research include understandings of risk perceptions, everyday geographies, events, hazards, urban informality and resilience. A social constructivist lens is utilised in order to understand people’s **perceptions of risk**. According to Pidgeon et al (1992, 89) this: “Involves people’s beliefs, attitudes, judgements and feelings, as well as the wider social or cultural values and dispositions that people adopt, towards hazards and their benefits”. Risk perception is multidimensional where a particular hazard can signify “different things to different people” (Ibid). The starting point for considering the everyday involves “ordinary people, everyday actions and commonplace events” (Rigg 2007, 16). The **everyday** (Ibid, 7) signifies the: “Details and minutiae of local lives and livelihoods and the local structures and processes that create such everyday lives and which are, in turn, created by them”. This research utilises the concept of **events**. It is defined as occurrences that are “extraordinary, punctuating” and which “throw lives out of kilter” (Ibid, 17). Events as occurrences: “May be atypical but understanding their impacts and effects requires that the events are embedded in everyday geographies which, perhaps only for a short time, become particular day geographies” (Ibid).

The United Nations Office for Disaster Risk Reduction’s (UNISDR 2015, 9) definition of **hazard** is utilised in this research: “A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have

different origins: natural (geological, hydro meteorological and biological) or induced by human processes (environmental degradation and technological hazards)". In this research, **urban informality** is defined as (Alsayyad and Roy 2004, 5): "A logic that structures the very fabric of urban life [in much of the world]. It is a process of structuration that constitutes the rules of the game, determining the nature of transactions between individuals and institutions and within institutions". The last key concept for this research is resilience. There are many ways resilience is theorised and in this research, Katz's understanding of **resilience** (2010, 318) is utilised due to its relevance for the empirical work: "Resilience, as the name suggests, is a means of getting by and recuperating one's self, community, or resources in the face of dominant social forces. Resilience expresses and fosters what Gramsci (1971) called autonomous initiative". Together, these concepts provide a framework to understand the empirical work and to guide the emerging analysis.

1.4 Research contribution

The overarching contribution of my research is the linking of disaster and urban studies of ordinary medium sized cities through the concepts of risk perceptions, resilience, community and a multi scale analysis leading to insights of relevance for theory, policy and practice. This research argues to de-privilege disasters and a conceptual space is created for engaging through time and space with a broader interpretation of urban risk and urban resilience as perceived by actors from the local to the national and to the international scale. Through my empirically grounded research I am attempting to advance debates conceptually and theoretically as well as informing policy within the field of urban disaster resilience. I seek to contribute to a richer understanding of risk perceptions from the perspective of residents in a rapidly urbanising city of Nepal, through an intra-urban comparative lens. I argue that risk perceptions of everyday and of infrequent events need to be considered together and suggest incorporating the risk perceptions of urban dwellers and power relations within resilience debates. This is of relevance in order to bridge a gap in debates surrounding disaster resilience.

Intra-urban comparison of risk perceptions in the everyday and through events

The key contribution of my research is an intra-urban comparison (McFarlane et al, 2016) of two wards within an ‘ordinary city’. Through an intra-urban comparison I show how residents in different parts of the city perceive risks for themselves, their families and their environment. The intra-urban comparison showcases how parts of the city evolve in different ways and residents’ relationships to each other as well as to the local authorities differ. Enhanced understanding of the priority concerns and links between everyday risk perception and mechanisms for people and governments to engage with each other to understand and mitigate the risks households face provides new insights into the emerging urban landscape of Nepal.

Secondary contributions of my research:

Medium sized global South cities are under researched

Urban focused research in Nepal has primarily focused on Kathmandu Valley because until recently it has been the main urban hub of Nepal (Muzzini and Aparicio, 2013) to the exclusion of most other cities. Bharatpur, Nepal is the type of city that researchers have not investigated empirically to any significant degree in the global South (Dodman et al, 2013). Bharatpur is the kind of ordinary or marginal city in the global context that is economically, politically and spatially irrelevant. However, I propose that cities such as Bharatpur, with a population of less than 300,000 people and where the majority of urban inhabitants reside (World Prospects Report, 2014) warrant consideration. Residents often live in conditions where there is a relative absence of key provisions from the state including basic welfare, social services and infrastructures. Residents cope with the challenges of life in the city, and seek to improve their conditions (McFarlane and Silver, 2017). Such cities, I argue, are vital to research. Through this research, I will contribute to an incremental understanding of the changing and urbanising context of the world.

The international aid community use of the resilience discourse

In the past two decades, the Hyogo Framework for Action 2005 – 2015 (UN/ISDR, 2005) and the more recent Sendai Framework for Disaster Risk Reduction 2015 - 2030 (UNISDR, 2015) has propelled the resilience agenda forward. Understanding how the international aid community is using the concept of resilience is brought to

the fore through this thesis. The manner in which the international aid community (IAC) struggle to implement their work in an environment where their priorities frequently do not match the priorities of people in Nepal is addressed. Power relations are ignored and ‘communities’ are expected to help themselves in a time of danger. Through this engagement with resilience, I will argue for the international aid community to listen to the urban world’s majority and their perception of risks and forms of resilience and reworking (Katz, 2010).

Complex relationship between local authorities and people

A contribution of this research is an appreciation for the complexity of the informal governance of social space and connections in the urban everyday. Individuals are creating informal groups in order to mitigate against perceived risks as well as to attempt to influence the local authorities. This research contributes a nuanced understanding of the interplay of different actors over time and space. Residents organise themselves in response to perceived everyday risks. The linkages they attempt to forge to gain visibility by the local authorities, highlights the significant effort required by the urban “we” (Simone, 2015). Tensions increase when the local authority changes the way it governs forcing communities to renegotiate their relationship with Government. This research argues for a more nuanced appreciation of the complexities of relationships on a local level.

1.5 Structure of the thesis

This thesis can be divided into two sections. The first section sets out the conceptual frameworks that have shaped this study and also introduces the methodology utilised to investigate the research questions. The second section contains four empirical chapters. Lastly the conclusion summarises the research project and looks into the future.

Section 1

Chapter Two reviews several bodies of literature and sets out the key conceptual and theoretical frameworks that will be drawn upon throughout this thesis.

- Firstly, the concept of resilience is presented with an emphasis on how resilience is being utilised in Disaster Risk Reduction and climate change

discourses. The resilience lens is creating a space for dialogue amongst different actors (Bene et al 2013; Manyena, 2006) but is also being utilised to push responsibility onto individuals. Attempts by the international aid community to operationalise resilience are presented and critiqued (Schipper and Langston, 2015). Community resilience, the masking of power relations (Brown, 2014) and impact of multiple scales is reflected upon in this conceptual framing.

- Secondly, a lens to learn about an ordinary medium sized city (McFarlane and Robinson, 2012; Robinson, 2006; Roy and Alsayyad, 2004) through understanding everyday geographies (Rigg, 2007) for urban residents (Simone, 2014) and their focus on livelihoods and community is argued.
- Thirdly, informality in the urban (people and the government) as well as how legibility is governed in the urban is framed in the literature review (Roy, 2009). Urban theory with a focus on gray space and informality is utilised (McFarlane, 2010; Yiftachel, 2010; Roy, 2009; Robinson, 2006) to represent not only people and the government but also the control and governing of legibility in the urban.
- Fourthly, cities as risk landscapes are explored through context (Mitlin and Satterthwaite, 2013), the social construction of people's risk perceptions (Pidgeon et al 1992; Douglas and Wildavsky 1982) as well as multi scalar urban governance.

Chapter Three introduces the methodological approach utilised to undertake this intra-urban comparison (McFarlane et al, 2016). The epistemology of research is described through place, research partners, selection of fieldwork location and description of wards of comparison. I explain how key respondents from wards 4 and 11 were selected and the socio-demographic characteristics of the 23 key respondents from these wards. I also describe the other respondents on a local, national and international level interviewed as part of this study. The manner in which the research took place in practice including gaining consent, the role of gatekeepers and research assistants is considered. The methods include semi-structured interviews, focus groups, and photography. Analysis and understanding of different scales is considered through the methods utilised. I reflect upon my

positionality and lastly, I reflect upon the evolution of the research, elements of reciprocity and learning throughout the research process.

Section 2

Chapter Four presents a social constructionist lens (Pigdeon et al, 1992) to learn about the city through the risk perceptions of residents in two wards. What becomes apparent in this research is the importance of positioning risk at the centre of discussions and the necessity to consider a portfolio of risks from the perspective of residents. Profiles of respondents from ward 4 and 11 are presented and their perceptions of everyday risk is explored including the similarities and differences within and between wards. The perceived risks include economic insecurity as well as a desire to hope for the future and give their children a quality education. Other everyday risks are presented in the form of poor quality physical infrastructure and more infrequent hazards such as flooding. Earthquakes are also considered in this discussion. Natural hazards are not the priority for residents rather residents focus on what is within their own control and influence.

Chapter Five explores how urban residents address some of their perceived risks through participation in groups. Residents organise themselves into informal groups of ‘we’ ness (Simone, 2015) to address everyday risks. Community resilience and reworking (Katz, 2010) the urban is explored through the women’s groups and tole level organisations. The physical, financial, environmental and social infrastructure of the city is presented and who serves as infrastructure through the informal space is explained. Tensions between the groups are highlighted. Lastly, how the local authorities govern informality through the acknowledgement and visibility of some urban residents and groups while ignoring others is argued.

Chapter Six explores the changing urban risk environment for residents in the two wards of comparison and a rural area that was amalgamated into the sub metropolitan city while the empirical research for this study was being undertaken. Two events occur which are of significance to respondents. The first event is the change of local government status which impacts local risk perceptions and results in the possibility of risk accumulation through economic stress and diminishing

influence for some residents. The second event is the 2015 Gorkha earthquake, which does not change the risk hierarchy of the residents interviewed but does reinforce everyday marginalisation for some residents (economic and lack of influence). What the earthquake allowed to happen through the combination of the change in government status and the earthquake in Bharatpur is explored. Issues of decentralisation and resources, unexpected financial risk for some residents, as well as how some groups need to rework responses to urban risk is considered. Lastly, accumulation of risk, the changing form of risk governance and the need to rework response to local government is argued.

Chapter Seven explores how the international aid community is utilising the concept of resilience in their desire to increase Nepal's resilience to disasters. Resilience is being utilised as a strategic bridging concept between the disaster, development, climate change and humanitarian sectors. The concepts of resilience and community are project management tools for the practitioners and donors to report on how they are utilising funds. Resilience is also being formulated as a critique of development in Nepal where a holistic understanding of development has been lost. Lastly, consideration for a safe urban future where the priorities of residents and an understanding of the interconnectedness of scales and power relations is further argued.

Conclusion

Chapter Eight reflects on the research findings and draws my arguments together in relation to my research questions. Considerations for the future, implications for policy in Nepal and other post-conflict, multi hazard prone countries and lastly suggestions for future research themes are offered as well.

Chapter 2 Framing risk, informality and resilience in a city

2.1 Relevance of literatures to my research

My epistemological approach is based on theoretical engagement with a range of literature – urban theory, informality, everyday geographies, cultural understandings of risk perceptions and resilience. A lens to learn about an ordinary medium sized city through the framing of the everyday for the urban majority and their focus on everyday concerns and forms of community is considered. Urban theory with a focus on gray space and informality is utilised (McFarlane, 2010; Yiftachel, 2010; Roy, 2009; Robinson, 2006) to represent not only people and the government but also the control and governing of legibility in the urban. This provides a contribution to considerations of typical urban spaces. Cities as risk landscapes are explored through the social construction of people's risk perceptions as well as multi scalar urban governance and understandings of urban disasters. The conceptual framing for the struggles of urban residents, how they live and what they focus on (Rigg, 2007), their perceptions of everyday risk, coping mechanisms and relationship with government are explored. The resilience lens is presented through representations in disaster risk reduction (DRR) discourse, the drive to operationalise resilience and also the manner through which the concept is bridging silos amongst different actors. These bodies of literature frame the conceptual boundaries for this research and guide the reader to *vade mecum* (follow me) through this thesis.

2.2 The resilience lens

Anderson (2015, 60) asks, “What kind of thing is resilience?” and also “What exactly it is that has proliferated, how and why?”. Researchers have highlighted the multiple definitions of the term resilience (Bahadur et al, 2010) and it is currently utilised in a ubiquitous fashion with different definitions in different settings often leading to confusion (Bene et al, 2012; Levine et al, 2012; Brand and Jax, 2007). One could agree with Rose (2009, 1) that resilience is “either poorly defined or defined broadly as to be meaningless”. Even though it is commonly accepted that the concept of resilience derives from the ecological field, this perception warrants clarification. Rival argues, (2009, 296-297):

“According to the OED, the English word resilient comes from the Latin word resilience, which derives from the verb resilire (to rebound or to recoil), a compound of re (back) and salire (to jump, to leap). The word first used in English by Bacon in 1626 was formally defined in 1656 as meaning a leaping or skipping back, a rebounding”.

Resilience has been utilised in many diverse fields, some learning from other fields although often in parallel and not in a clear manner. Each of the fields below in Figure 2.1 contributes a new source of knowledge to the discussion of resilience.

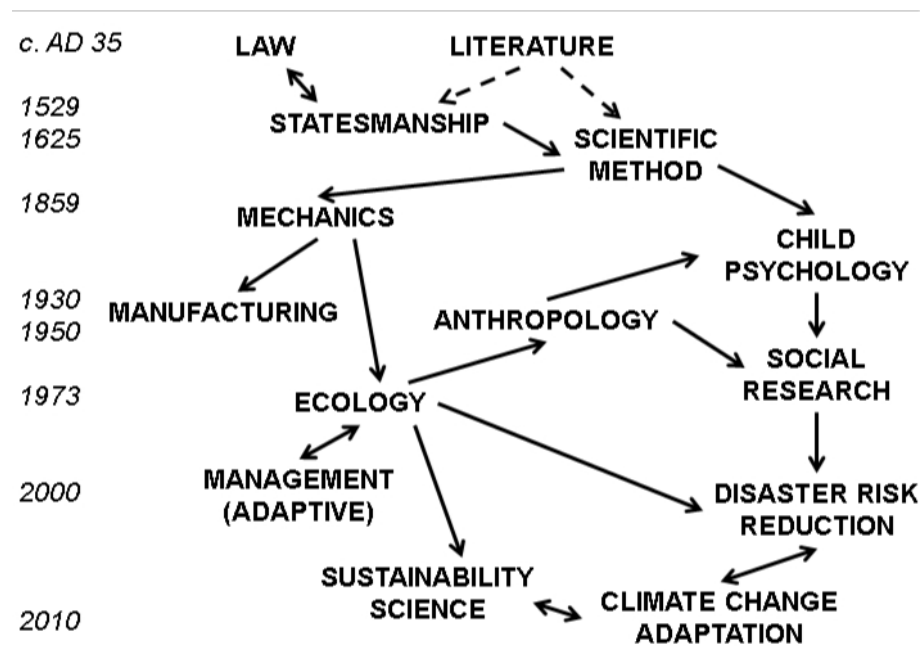


Figure 2.1: Schematic diagram of the evolution of ‘resilience’ (Source: Alexander 2013, 2714)

However, the framework for discussion varies within each discipline (Alexander 2013, 2713):

“It is striking how the term is used in different disciplines without any reference to how it is employed in other fields, as if there were nothing to learn or transfer from one branch of science to another”.

This continues to be relevant at the present time when copious amounts of literature are being written about resilience often at odds with each other. At times, it is difficult to see how the resilience debate is being moved forward in the hazard and risk field in particular. Some scholars call for a more integrated approach to understanding resilience where multiple disciplines and actors are involved thus

utilising the concept of resilience in a more nuanced manner (Julich et al, 2012; Carpenter et al, 2009; Cumming et al, 2005). Rival (2009, 299) suggests:

“Although resilience researchers aspire to link the physical, ecological and social domains in effective ways, they may be neglecting dimensions of the human-environment interface. Different cultural perspectives on human nature, the biophysical world, society and individual rights, as well as how these may influence behaviour towards the environment” need to be considered.

Issues of culture and power are also not particularly accounted for in a systems approach and warrant nuance and care otherwise they can be ignored (Brown, 2014).

2.2.1 Resilience in DRR and climate change discourses

Resilience is utilised in DRR more broadly in relation to natural hazards. In the climate change discourse, there is a relationship to cities that is of relevance to this research. The concept of resilience entered the disaster risk reduction lexicon, to the extent that it is currently accepted as a critical component of disaster risk reduction initiatives throughout the world (UNISDR, 2015; UNISDR, 2013). The International Decade for Natural Disaster Reduction (1990-2000) created a discourse for reducing the disaster risk of communities at risk to natural disasters (Alexander, 2012). The emphasis slowly began to shift from reaction and response to pre-emptive action and thus emerged the concepts of disaster risk reduction and resilience (UN/ISDR, 2005) according to Alexander (2012). Since 2000, the International Strategy for Disaster Reduction has been striving to promote the linkages and synergies between, and the coordination of, disaster reduction activities in the socio-economic, humanitarian and development fields, as well as to support policy integration. This was concretised in the Hyogo Framework for Action (HFA) at the World Conference on Disaster Reduction in January 2005 (UN/ISDR, 2005), where strategies to build the resilience of nations and communities to disasters were agreed and committed to by 168 governments (UNISDR, 2013). The HFA attempted to promote a strategic and systematic approach to reducing vulnerabilities and risks to hazards. In 2015, The World Conference on Disaster Risk Reduction in Sendai approved the subsequent Sendai Framework for Disaster Risk Reduction 2015-2030 (UNISDR, 2015).

In the disaster risk reduction literature, Walker and Westley (2011) define resilience as the capacity to survive, adapt and recover from a natural hazard induced disaster. This relies on understanding the nature of possible disasters and taking steps to reduce risk before a hazard event occurs as well as providing for quick recovery when a natural hazard occurs. Carpenter et al (2001) give some clarity to the discussion on resilience by stressing the necessity to focus on the context: resilience ‘of what and to what’. Carpenter et al (Ibid, 777) also refer to the “flexibility of agents to negotiate local solutions to the problem and the existence of incentives to increase resilience”. At times, Carpenter et al’s comments are lost in the resilience discourse to the detriment of people in the global South. Lavell and Maskrey propose that resilience has become a “schizophrenic construct that has now become a mantra at all levels” (2013, 23) in the disaster risk reduction sector. Lavell and Maskrey propose that resilience is “implicitly or explicitly presented as protecting the development processes and forms that constructed risk in the first place” (Ibid). This suggests resilience as a concept has been co-opted by the DRR framing.

In the climate change discourse, resilience is interpreted as a framework that includes absorptive capacity, adaptive capacity, and transformative capacity. Bene et al (2013) define absorptive capacity as the ability to cope with and absorb the effects of shocks and stresses. Adaptive capacity is the ability of individuals or societies to adjust and adapt to shocks and stresses but keep the overall system functioning in broadly the same way. Lastly, Bene et al (2013) suggest transformative capacity is the ability to change the system fundamentally. Most recently, ‘transformability’ has received attention as the new ‘bounce forward’ in relation to resilience. Transformation highlights new pathways that can be explored to enable communities to change their reality (Bene et al, 2013). Transformability is viewed as the capacity to evolve into a fundamentally new system when existing conditions are untenable (Folke et al, 2010; Walker et al, 2004). Pelling (2011, 51) proposes caution in utilising the concept of resilience:

“The power of resilience to suppress deeper changes in the institutions and values that shape development and risk management is reinforced by its attractiveness as a solution to climate change risks for donors and government precisely because it does not challenge the wider status quo”.

More recently, the relationship between resilience and transformation has appeared in the context of cities. Satterthwaite and Dodman (2013) highlight the need for towns, cities and other settlements to become resilient to climate change. They argue that a large portion of world's inhabitants live in settlements where they do not have the tools required to help themselves. Satterthwaite and Dodman (Ibid) agree with Pelling's interpretation of resilience and transformation. They stress that adaptive policies, addressing risks and a variety of institutional support that address the needs of all stakeholders (including the full range of urban dwellers) need to be developed. This will require fundamental changes in political and cultural systems (Satterthwaite and Dodman, 2013; Pelling, 2011). Such systemic changes have proved difficult to initiate and sustain until this time. Through these literatures on resilience and cities, the significance of the local level and the role of the local authorities are highlighted as important resources for mobilising change.

2.2.2 Making the most of resilience

The lens of resilience creates a space for dialogue amongst different communities of international actors. This space for dialogue should not be underestimated, resilience should be valued as a unifier for a variety of discourses to come together and engage (Mitchell and Harris, 2012). Resilience is a "shifting concept" (Joseph 2013, 51), whose meaning and tenor changes depending on the conceptual discourse it is being engaged in. Voss and Funk (2015, 255) suggest a multidimensional approach is necessary in resilience research:

"To bridge the gap between official narratives that are largely derived and connected to scientific arguments and the living realities of the people: an approach that integrates local, regional and global actors and their viewpoints in a trans disciplinary manner, i.e., an approach that is oriented towards the problems and solutions that arise from real life".

Resilience thinking, holistic, can bring together different perspectives (social, human, economic, physical, environmental). There is no agreed upon definition of resilience nor should there be. Some academics view resilience as a form of neo-liberal governmentality (Evans and Reid, 2013; Joseph, 2013) while others continue to find inspiration from the concept (Brown, 2014). Kelly and Kelly (2016, 2) even argue that it is possible that "reclaiming resilience, building solidarity, and political agency can also go together" based on their research of how resilience was used by

practitioners. Utilising Bene et al's (2013) phrase, 'making the most of resilience', in the disaster risk reduction discourse, resilience is considered in a normative fashion, even aspirational thus appealing to diverse groups (UNISDR, 2013; DFID, 2011).

While resilience at first glance appears to be a value-neutral concept, Cote and Nightingale (2012) suggest it is inherently embedded within normative ideas of what states are desired and what kind of shocks are acceptable. Attributing qualitative attributes distorts the concept by attributing expectations that resilience cannot achieve (Bene et al, 2013). Resilience as an analytical framework does not have a moral compass (Ibid); for example, resilience could be achieved at the expense of wellbeing (Armitage et al, 2012). Resilience does not decrease or alleviate poverty, it is not 'pro poor' (Bene et al, 2012); people can be poor and resilient at the same time. Often times, the poorest people are very resilient in their coping strategies (Bene et al, 2013). Therefore, development efforts should concentrate on poverty alleviation and wellbeing, not only on resilience building (White, 2010; Lavers, 2007; Colletta and Cullen, 2002). According to Manyena (2006), resilience appears positive, but it could push the responsibility of adaptation, mitigation and recovery onto individuals, those most adversely impacted. Rather, responsibility should be placed on governments and other actors who have access to resources, influence and power to more adequately address the situation. Caution is warranted with the concept of resilience.

2.2.3 Operationalising resilience

Resilience has become an "increasingly dominant mode of Western intervention in the global South" (Pugh 2014, 314). Resilience is being discussed at the international policy level, position papers have been developed and donor projects are being formulated to build disaster resilience, community resilience, urban disaster resilience as well as other variations of resilience. The word resilience plays a central role in the international arena (UNISDR, 2015; OECD, 2013a-e) World Bank (Hallegatte et al, 2017) and in national policy papers such as DFID's Defining Disaster Resilience: A DFID Approach Paper (DFID, 2011). The framing of resilience has altered from "build back better" (Monday 2002, 1) in her article

discussing sustainable communities after disasters to communities ‘bouncing back’ (Twigg, 2007) and more recently ‘bouncing forward’ (Manyena, 2009) to a better future. Organisations such as Red Cross (Kyazze et al, 2012) began to document their lessons learnt and recommendations for future interventions in disaster resilience or community resilience building initiatives. There is not a clear or agreed upon understanding of what resilience is, how best to increase it, how it can be achieved and of critical importance for donors, how it is to be measured for evaluation purposes (Schipper and Langston, 2015; Levine et al, 2012).

Until now, it was unclear if the operationalisation of resilience through the development of indicators can be or should be further promoted. If it can be achieved, then the following issues need to be considered: is resilience is an outcome (Sudmeier et al, 2013; Manyena, 2006) that lends itself to being measured; or a process (Aldrich, 2012; Wilson, 2012a; Cutter et al, 2008; Paton and Johnston, 2006; Bruneau et al, 2003) changing over time and to specific events rendering resilience intangible and difficult to quantify or measure. A challenge is to construct techniques of measurement (Cutter et al, 2008; Carpenter et al, 2001) that can integrate both the outcome and process characteristics of resilience. Buckle (2006) and Carpenter et al (2001) stress that the context is important to developing characteristics, as is the hazard to which resilience is being enhanced. Characteristics are being developed according to numerous models (Schipper and Langston, 2015; Cutter et al, 2008; Norris et al, 2008) and some include a combination of social, economic, human, physical, natural, infrastructure and political factors (Mayunga, 2007). Bahadur et al (2013, 62) explain that one approach can be “to develop a set of principles of measuring resilience rather than a universally applicable set of indicators”. Understanding the elements of resilience that present themselves post disaster, may help to shed light on how to build community resilience to natural hazards (Aldrich, 2012; Ride and Bretherton, 2011; Solnit, 2009; Buckle, 2006). However, the tensions with operationalising resilience are difficult to reconcile.

Levine (2014, 2) suggests the attempt to “find the perfect resilience index is not so much a difficult quest as a search for a holy grail”. He argues this attempt distracts

from more important issues such as how to improve the lives of millions of people in the world. Due to the explosion in the use of the resilience term, and the multitude of operational models developed and utilised by practitioners, Schipper and Langston (2015) conducted a comparative overview of 17 resilience measurement frameworks, analysing indicators and approaches. They found differing epistemic roots and definitions and concluded that there are limits to what indicators can provide and that “universal indicators cannot exist” (Ibid, 9). Schipper and Langston (Ibid) found “the ability to measure resilience through consistent mechanisms is intended to enhance the accountability of funding for NGO programmes, which is necessary for budgeting and public investment decisions, as well as offering a way of assessing progress towards resilience” established by project variables or by acknowledging the Sendai Framework for Disaster Risk Reduction 2015-2030 or the Sustainable Development Goals.

Schipper and Langston (Ibid) caution against practitioners being overwhelmed by the challenging and complex frameworks being developed with the possibility of losing the strategic view of their mission. For example, in some frameworks they reviewed, it is not clear whether indicators refer to “individual or group resilience” as well as the potential to have lost sight of “who they are focused on, as in whose resilience is to be built” (Ibid, 19). Schipper and Langston (Ibid, 21) conclude their report by stating that it would be useful for practitioners and donors to find some common theoretical ground:

“To ensure that rather than tearing each other down because we don’t agree on how the concept is used, we can actually use this energy to help reduce the risk posed by climate change and natural hazards”.

There is clear frustration with efforts to operationalise resilience. In this doctoral research, a decision was made against focusing on operationalisation of resilience due to the lack of clarity regarding the value of this approach. Operationalising resilience may be of merit to donors and practitioners working in DRR but there does not appear to be much use for people who live with risk in their everyday life or when events occur.

2.2.4 Resilience bridges silos

Resilience serves a valuable role as a bridging concept in the development, disaster risk reduction, humanitarian and climate change discourses. Rival (2009, 294) explores resilience as a unifying concept:

“Some of the reasons why resilience has become such a powerful word in the last few years, and why, despite the obvious problems linked to its popularity and its co-optation in the development discourse, resilience is a useful concept that helps us overcome dichotomous thinking when we attempt to theorize the intractable linkages between the natural world and the social world”.

Schipper and Pelling (2006, 19) discuss the theoretical and policy linkages among disaster risk reduction, climate change and development:

“Not only does action within one realm affect capacity for action in the others but also that there is much that can be learnt and shared between research (in disaster risk reduction, climate change and development) in order to ensure a move towards a path of integrated and sustainable development”.

The prevalence of resilience in academic debates and policy discourse suggests that resilience has become one of the leading ideas to deal with uncertainty and change in our times (Hutter et al, 2013). Due to the fact that resilience manifests itself on various scales and levels (Bene et al, 2012; Gallopin, 2006); resilience thinking (Bene et al 2013, 2) can “help policy actors realise how actions at one level can have implications at others, and how intervention into one part of a system can help (or hinder) another part”. This focus on scales is a significant reason as to why resilience has become a key concept in the past decade in disaster and development discourse and will continue to serve an instrumental discursive role in the future. Swyngedouw argues that activities transpiring at one scale must be viewed in relation to other scales of influence (1997) in order to understand the influence and impact of the scales onto each other. Rankin stresses scale should also be viewed relationally, “recognized as a socially produced and politically contested category of analysis... Scale is not ontologically given or a politically neutral discursive strategy, rather it embodies and expresses relations of power (Swyngedouw, 1997)” (Rankin 2004, 64). “Resilience reflects and seeks to offer a positive alternative to the loss of modern frameworks” (Pugh 2014, 314). In this formulation, resilience bridges silos of thinking and creates a conceptual opening where development, disaster risk reduction and climate change discourses can find a newly created

common ground. This conceptual space can be where exploration of the interrelationships of the silos and scales occurs.

According to Alexander (2013, 2713), there will be disillusionment if resilience “is pushed to represent more than it can deliver, the problem lies in attempts to make resilience a full-scale paradigm, which it is not”. Another concern is the expectation resilience can provide more insight and greater modelling capacity than it is capable of furnishing (Ibid). Resilience as a concept can be useful if it is used with other concepts such as risk and vulnerability in the global South. Mitchell and Harris (2012, 6) argue that resilience is an integrating concept “that allows multiple risks, shocks and stresses and their impacts on ecosystems and vulnerable people to be considered together in the context of development programming”. The relationship between risk and resilience offers promise. Resilience has the potential to help researchers and the international aid community to obtain a fuller “understanding of risk and vulnerability” (Manyena 2006, 436). As a conceptual lens, resilience allows consideration of “uncertain futures and people’s agency” in the development of the future (Levine 2014, 1). Resilience can be used in conjunction with risk as a way to consider what is of relevance for residents, what do they need to be resilient to (and more than resilient) in the urban setting and how this can be supported and by whom. Resilience also has the potential to bring a lens to the issues that prevent people from managing some risks in their lives. This can be accomplished through the interconnectedness of risks, strategies to manage the risks and different scales. Buckle et al (2003, 83) argue that a model does not exist that links:

“Risk, vulnerability, resilience and day-to-day life in a coherent and puissant framework, nor have any analytical frameworks or models emerged that have managed to deal with the complex interactions of daily life, risk management, and disaster management in ways which allow for the linkage and integration of these issues between individual, group, community and system levels”.

This research considers the conceptual limitations of the resilience lens based on a lack of full appreciation of the role of people and politics. This review of resilience sets the context for research question four (How do international aid agencies understand urban risk and resilience in Nepal and to what extent do these understandings reflect the everyday lives and needs of urban residents). Although resilience was the starting point for this research, concepts such as risk perceptions,

urban informality and the relationship between the everyday and events (disaster and other occurrences) also are of conceptual relevance to this research.

2.3 Community resilience and power

Community resilience as a subset of resilience warrants reflection. Wilson argues (2013, 309), “resilience is not ‘made’ and does not emerge out of a vacuum, but it is transferred through complex processes of policy and other exchanges between communities and wider society”. Community resilience and the flow of power through spatial levels warrant consideration (Wilson 2012a, 1219):

“Community resilience, therefore, is often associated with the quest for multiple resiliences within a community pursued by highly varying stakeholder networks, some of which may be directly contradicting and undermining efforts by other groups in the community to achieve maximum resilience”.

Wilson’s definition of community resilience is associated with multi scales, influences and power. It is relevant to this discussion about the limitations of people’s power. The definition of resilience utilised by this research is Katz’s understanding of resilience (2010, 318):

“Resilience, as the name suggests, is a means of getting by and recuperating one’s self, community, or resources in the face of dominant social forces. Resilience expresses and fosters what Gramsci (1971) called autonomous initiative”.

This definition of (community) resilience is not aspirational but does address power relations in the social environment through which people can influence change.

2.3.1 Community

The concept of community needs to be interrogated at this point. Exploring etymological dictionaries, Esposito (2013 English version, 15) suggests community is derived from *cum* with *munus*. The words “with” and a “task,” “duty,” or “law” or bound by a gift to be given, thus an “obligation” according to Esposito. He argues that we “need communities”; they are “both necessary and impossible” (Ibid). Viewed from this perspective, communities are aspirational rather than a tool to achieve something else. If Esposito is correct (Ibid, 20), and the “only way to realize

community would be to overcome interests and individual differences, but interests and differences are in fact insurmountable, because they are also what constitutes our nature” then we need to tread carefully with how the concept is utilised. Anderson (2006, 6) suggests communities are “imagined” and can be distinguished “by the style in which they are imagined”. This can lead to a discussion of what do we need communities for, who decides which community is needed and what is the community obligated to do. Researchers have written extensively on the issue of community in relation to space and scale (Delanty, 2010; Hoggett, 1997). The concept of power emerges in Hoggett’s (1997) discussion of community development. He states that community development is related to power and empowerment, power is not a finite entity held by one party, channels are created by which power flows over time. There are many different stakeholder groups or individuals within ‘communities’, and these individuals function within complex networks of entanglement and power relations. They may have highly divergent aims leading to different outcomes for communities who may be located in the same geographic area.

Bankoff et al (2015, 8) argue “power relations are almost always present (in a wide variety of configurations), especially on grounds of gender, class, ethnicity, caste, patron-clients relations or age group bonding” in relation to communities. These dynamics are often difficult to make visible but they wield tremendous influence on the way individuals and their communities can influence the urban. In the urban everyday, the concept of community masks a “highly urbanized social infrastructure” (Simone 2004, 407) comprised of heterogeneous residents and their ways of maneuvering. People in cities use space in a variety of ways and their concept of community may change depending on the topic being discussed. The relationships between different groups within the community (based on gender, caste, migration, economic resources, housing stock, etc.) and also with the government are of relevance to this research project and will be explored in the empirical chapters.

In disaster studies, Cannon et al (2014) suggest ‘community’ is a myth while de Beer (2013) considers community to be a romantic idea of the international aid

community. Ride and Bretherton (2011, 3) suggest DRR and disaster researchers “tend to assume that the community is a pre-existing entity, one that needs to be educated otherwise changed to mitigate future hazards, risks and vulnerabilities to natural disaster and their effects”. This is not the case. People have risk perceptions; natural hazards are not a priority (Ruszczuk, 2014) unless they are regular occurrences and then are often incorporated into their everyday lives (Sou, 2014). Ride and Bretherton (2011, 13) in their research on natural disasters suggest a community is “not a fixed entity but as being created through interaction and able to learn through experience”. Locally based communities and the individuals who form communities have agency to adapt to new conditions and shape their own social arrangements (Ibid). Communities are not static.

2.3.2 Community resilience and the masking of power relations

There exists a false security in the policy sphere that it is feasible to equip communities (as a self contained group of individuals) with the skills to be resilient to the everyday, hazards, events or even to climate change. The language of community resilience may limit the responsibility of those who have power, those often located far from the urban residents discussed in this thesis. Resilience is “dangerous because it is removing the inherently power-related connotation of vulnerability” according to Cannon and Muller-Mahn (2010, 623). Due to its conceptual framing in the disaster and climate change discourse from social and ecological systems approach, Cannon and Muller-Mahn argue resilience is “inadequate and even false” “because human systems embody power relations and do not involve analogies of being self-regulating or “rational”” (Ibid). Cannon and Muller-Mahn (Ibid, 633) argue the “Resilience approach is in danger of a realignment towards interventions that subsumes politics and economics into a neutral realm of ecosystem management, and which depoliticizes the causal processes inherent in putting people at risk”.

The language of community resilience enables donors, international non governmental organisations (INGOs) and governments to consider the future and how to support people to withstand disasters and prove their resilience. The concept of community resilience is utilised without fully engaging with the power structures

that keep people and their communities locked in systems that keep them at risk to hazards and other situations or events that can become disasters. “A central analytical task is to uncover the range of narratives in a given situation, identifying which are dominant, what alternative narratives exist, and which might be hidden or suppressed – including those produced by marginalised people, or supporting their perspectives and priorities” (Leach 2008, 3). Power relations are essential to understand. Resilience as a concept does not have much value for Nepalese people; they are extremely resilient. They want to be more than resilient. “Resilience planning, like sustainability, is already being practiced by communities, even though they do not call it that” (Manyena et al 2011, 423).

Considerations must be given to “political choices... including decisions about whose perspective (and whose resilience) counts” (Levine 2014, 6). “Power relations are involved in assigning or avoiding responsibility and accountability; the domination of certain framings / narratives over others, asymmetries between pathways, and which are pursued and which are not” (Leach 2008, 15). A conceptual space needs to be created for the voices who are not represented when community resilience is discussed. Normativity of resilience may mask issues of power, temporality and spatiality. Why, how and for whom resilience is of value or necessity is not often addressed. Carpenter et al (2001) first used the phrase “Resilience of what to what?”. This phrase continues to be relevant. Using the understandings from development studies and science and technology studies, Leach suggests asking “‘resilience of what, for whom?’” (2008, 3). In relation to social construction of resilience, Pugh (2014, 314) argues “Resilience discourses and policy often fail to recognize how resilience is socially contingent, rarely addressing the question: ‘resilience for whom?’ (Brown, 2013)”. By asking questions such as “‘whose resilience is important?’” to “‘what event / hazard?’”, “‘whose lens is being used to discuss resilience?’”, “‘who impacts resilience?’” another set of discussions emerges. By understanding the power relations between a wide range of actors who influence the context and understanding the range of scales involved as well as the intersectionality between those scales only then can resilience as a concept be used to benefit those who need more than resilience in their urban lives.

2.3.3 Multi scales and community resilience

Increasingly, research is considering the relationship between community resilience, hierarchies of scale and interconnections between people in different spaces. The concept of multi scales can influence discussions of the urban and communities. Carpenter et al (2006) draw attention to the importance of cross-scale effects of key variables and to the hierarchy of linked social-ecological processes operating at different temporal and spatial scales. Wilson (2012b, 2) suggests local communities and individual pathways are “embedded in nested hierarchies of scales with close scalar interconnections between the community and the regional, national and global levels”. Bene et al (2013) argue for the emphasis of resilience on holistic and cross-sectoral approaches. This offers the opportunity to understand the consequences of shocks on different levels (local, national and global) and across different scales since disasters will affect people and environments simultaneously.

Analysis of broader spatial and temporal scales will strengthen understanding of community resilience; according to Walker et al (2004, 299), “resilience can operate at different scales, and it has been noted that there can be losses of resilience at some scales thereby increasing it at other, higher scales”. Mayunga (2007) explores resilience utilising the major forms of capital (social, economic, physical, and human) in building community capacities to deal with disasters. Norris et al (2008) view community resilience as a process and not an outcome. Communities are perceived to be composed of built, natural, social, and economic environments that influence one another in complex ways. Walker et al (2004), and Norris et al (2008) focus on the interrelationships between different systems on different levels and the necessity to view the relationships between various components. Manyena et al (2011) propose that the essential elements for community resilience are effective governance, diversification of livelihood assets and relationship with the environment supporting the position of Wisner et al (2004). Satterthwaite (2013) explores the concept of accumulated resilience. The fundamental elements are the same: the relationship between government and city dwellers, livelihoods, social frameworks, the necessity to explore and remain cognisant of how different parts of the city and its residents develop and relate to each other and the government. This inclusive approach offers hope for cities, residents and the communities they create.

“Resilience is complex, context-specific and highly dynamic” (Armitage et al 2012, 6). The change that will occur after a ‘disaster’ will be based on the context in which it occurs – the pre, the event, the response and the recovery processes in place. Community resilience should be considered in relation to a specific event where the new reality may be similar to the pre-disaster situation or it may be fundamentally different. This may be considered alternatively as ‘bouncing back’, ‘bouncing back better’ or lastly, ‘transformational change’. These outcomes are aspirational goals; theoretically, change is possible, although power issues, the agency of individual and communities they are part of and the severity of the event or disaster may not lend themselves to transformational changes. This discussion of community resilience provides the context for the discussion of community resilience and the international aid community (research question four).

2.4. Learning about the ordinary medium sized city

In the content of urban debates, Robinson stresses the necessity to understand “the challenges of a world of (ordinary) cities” (2006, 115). She suggests we engage with cities that are “dropped off the map of much research in urban studies” (Ibid, 99). There has been a movement in urban centered research from the global North to global cities of the world and more recently there has been an awareness that a research gap exists on the world’s medium sized cities where the majority of the world live (Krause, 2013). Krause labels these under researched cities “boring cities” (Ibid, 242) as an indication as to why they have not been researched to a large extent. This turn towards the global South and other types of cities has also highlighted a necessity to understand the everyday and the ordinariness of these cities. It is in this context where research on livelihoods and economic security and disaster risk reduction efforts can interact to create new understandings. Research in a medium sized city of the global South offers a new lens to understand how people live, what they perceive as risks not only in the everyday but also when events occur. And lastly, how urban residents create coping strategies to address their perceptions of risks over a range of temporal settings.

2.4.1 Reframing the urban debate

Reframing the urban discussion from a predominately global North dominated perspective to include the global South is overdue but is beginning to take root. As summarized by Robinson (Ibid) “poorer cities and marginal citizens have been profoundly excluded from the theoretical imaginary of the urban modernity” (Ibid, x). The dominant urban discourse, theories of modernity and conceptual apparatus of developmentalism (Ibid) have created a situation where the global South¹ has been viewed in a marginalised, fragmented manner. Postcolonial scholars such as Robinson, Parnell, Oldfield and McFarlane (Robinson, 2006; Parnell and Robinson 2012; Parnell and Oldfield, 2014; McFarlane and Robinson, 2012) have called for locations and experiences from the global South to be incorporated in urban theory. Roy and Alsayyad (2004) argue that during the past 20 years many massive changes have occurred in the way we view the urban: researchers are increasingly more open to learning from other parts of the world. This reframing of the urban discourse has allowed for discussion of international similarities and differences within and between countries irrespective of where they are geographically located (McFarlane and Robinson, 2012; McFarlane, 2010). In their review of this new epistemology of the urban, Brenner and Schmid (2015, 160) suggest post colonial theorists stress the “urgency of elaborating alternative categories for understanding the contextually specific patterns and pathways of urbanization that have emerged, for example, in East and Southeast Asia, Latin American, Africa or the Middle East”. Until recently, the mega cities of the global South were the primary site of research for scholars from which to make comparisons with the global North in relation to modernity.

Cities with fewer than half a million inhabitants do not receive much scholarly attention (Silver, 2014; Krause, 2013) and it is time to research them more fully in their own right. Mitlin and Satterthwaite (2013, 7) maintain that approximately 2.7 billion inhabitants are in urban areas of the global South, the urban areas: “have close to two fifths of the world’s total population and close to three quarters of its

¹ The global South includes “all nations classified by the World Bank as low- and middle-income that are in Africa, Asia and Latin American and the Caribbean” (Mitlin and Satterthwaite 2013, 13).

urban population. The global South also has most of the world's large cities and most of its mega-cities". Furthermore, the majority of the world lives in medium and small cities - 1.711 billion people live in cities with less than 300,000 population and 250 million live in cities with a population between 300,000 and 499,999 (United Nations, 2014). "There is no universally accepted definition for an urban centre or for a city or for when an urban centre becomes a city but the term city implies a scale or a political or religious status that would mean that a large section of the world's urban population does not live in cities" (Satterthwaite 2011, 1764-1765). The fact that there is no universally accepted definition for an urban centre or for a city as well as for when an urban centre becomes a city highlights issues that can become problematic when conceptually discussing the urban and or the city.

In Nepal, "urban" is understood to include all municipal areas, although there are inconsistencies and recent changes in terms of what is defined as a municipality. When the Local Self-Governance Act of 1999 redefined municipalities, this was controlled by political ad hoc-ism, and the criteria differed between the Terai belt along the Indian border and the hill districts, a differentiated strategy that made municipal status far easier to achieve in the more politically favoured hill districts" (Tanaka 2009, 144). "According to the criteria for municipalities in the local Self-Governance Act 1999, the minimum population size should be 20,000 in the Terai and 10,000 in the hill/mountains" (Ibid). Basic services such as roads, drinking water, electricity and security were expected to be in municipalities as well. There were three classifications of municipalities per the Local Self-Governance Act (municipality, sub metropolitan city and metropolitan city). Due to the fact that there have not been local elections since 1997 the central government chose the staff in the municipalities. Staff were relocated to other municipalities on a regular basis. This resulted in appointees being more concerned with satisfying central government mandates rather than directly addressing local concerns. The most important official representing the central government on a local level was called the chief executive officer and he managed the municipality. The lowest level of the municipality was the ward level and was managed by the ward secretary.

Until April 2014, Nepal was largely a rural country led locally by village development committees reporting to the Ministry of Federal Affairs and Local Development. Only 17% of the population lived in urban areas (IFAD, 2014). This is undergoing rapid transformation spearheaded by the Ministry of Federal Affairs and Local Development (MoFALD). In 1991, there were 33 municipalities, in 2001 there were 58 municipalities including the metropolitan city of Kathmandu and four sub-metropolitan cities (Tanaka, 2009). In May 2014, 72 additional municipalities were created in Nepal (total of 130). In December 2014, an additional 61 municipalities were created and some of the existing cities were enlarged thus resulting in a total of 191 municipalities. In early 2015, an additional 28 municipalities were created for a total of 219. Nepal has 15 cities with over 100,000 residents, and Kathmandu has over 1 million residents. By the end of 2015, Nepal had over 40% of its population living in urban areas according to MoFALD (pers comms). At the present time (2016), revenue stream and level of built infrastructure are also taken into consideration by the central government when approving the creation of a new municipality.

In smaller cities of the global South, the dynamics between residents and local authorities can differ from the mega cities researched until now. The local government may have a closer relationship with residents and may be more “responsive, but possibly also have less capacity; civil society may also be less well developed and governance as a whole is likely to be oriented more towards rural than urban settlement concerns” (Pelling 2012, 150). Small and medium sized cities of the global South lend themselves to a different set of discussions and narratives waiting to be told. This research contributes to the emerging body of literature on this subject. Specifically, there are possible ways of “learning the city” (McFarlane, 2011) that depend on the way residents live their everyday lives, the way residents interact with systems of governance and how residents interact with less common occurring events. The city has “‘disruptive’ tendencies” due to its heterogeneity which creates a space where change can occur to the way residents think, interact, and function (Evans 2015, 12). The city may offer opportunities that may not be present in rural areas. Urban life in the majority of the world as a practice “is shaped by those that challenge it [neo-liberalism] through a range of alternative imaginaries

and practices of participation, self-reliance, autonomy, diversity, subaltern communities and knowledges, differences and specificities” (Peake and Rieker 2013, 3). In the majority of the world’s cities, residents are living and learning how to make their lives better in a reality that can be considered difficult without access to basic infrastructure and where the local government is often struggling to fulfill its mandate.

2.4.2 Conceptualising an urban majority’s everyday

The lives, livelihoods and neighborhoods of the global South’s urban majority, those who can be considered ‘upper poor’, ‘working class’, and ‘lower middle class’ – are often not considered in discussions of the world’s cities (Simone, 2014). There is a wealth of literature on the urban poor and the vulnerable as well as the emerging middle class of the global South. “But knowledge of the “in-between” remains limited-of what is perhaps the “majority” of the [world’s] urban residents. This majority includes a wide range of professions, workers, livelihoods and ways of life” (Simone and Fauzan 2012, 129). Thus the global South’s urban majority can be considered the “missing people” (Simone, 2014) in research. The missing people’s “dilemma is how to demonstrate that where they live and what they do matters, when the possibilities of translation, visibility and value become more problematic” (Ibid, 323). Their everyday lives in medium sized cities are not fully considered in debates about the urban or the city. With this framing in mind, the concept of the everyday allows us to consider how the majority of the world, who do not possess visible power, behave in their urban everyday lives. The everyday creates a lens into what residents prioritise and why (Rival, 2009; Hobson and Seabrooke, 2007) as well as how they get by, cope and ultimately, how their actions influence the urban. Understanding the everyday allows for an acknowledgement of the “important contribution of ordinary people on their own” (Rigg 2007, 17) to a collective history of their communities, their country and even further afield.

Through consideration of urban dwellers and their everyday existence (Simone 2004, 408), “a specific economy of perception and collaborative practice is constituted through the capacity of individual actors to circulate across and become familiar with a broad range of spatial, residential, economic, and transactional positions.” It

is relevant to understand how urban dwellers navigate and create their urban space, reality and relationships or networks. This showcases a “texture of highly fragmented social space and these emerging interdependencies complement each other in forming an infrastructure for innovative” (Ibid, 419) maneuvering of residents who live and rework the city for their benefit, individually and in groups. In Nepal, ethnicity and caste continue to be important social and economic markers. What becomes important for the urban residents “are the negotiations themselves as a context in which residents can continuously realign their efforts and break open new potentials for accessing information, support and resources” in the city (Simone and Fauzan 2012, 146). Often this entails ways of working that are temporary or are on a specific topic. The city allows, for example, ethnicity to be temporarily ignored when residents need to work together and negotiate for changes.

The city and rapid urbanisation allows residents to collaborate in ways that are not based exclusively on traditional forms of social organisation such as caste, ethnicity, or length in the city (Ibid); these collaborations lead to unexpected reworking and results in the city. The crossing of historical lines of segregation to collaborate which “residents were making to improve their situations or seize opportunities when they could, were worked out often by coming up with re-improvised schemes and activities that might have proved difficult if local politics had been more formalized or normatively democratic” (Ibid, 132). Cities, where the majority of urban dwellers are located, are often heterogeneous. Cities open up space for maneuvering and collaboration. Residents “calculate their possibilities within the city” (Simone 2011, 403), they utilise their resources and cooperatively create parts of the city that may not have occurred otherwise.

2.4.3 The everyday and livelihoods

The concept of the everyday (Rigg 2007, 7) signifies the:

“details and minutiae of local lives and livelihoods and the local structures and processes that create such everyday lives and which are, in turn, created by them”.

The starting point for considering the everyday involves “ordinary people, everyday actions and commonplace events” (Ibid, 16). This acknowledges the importance of

ordinary people and their actions that cumulatively have an impact on other scales beyond the local. Everyday life and how people live is centered on the mechanisms and components of livelihoods that can be described as the “capabilities, assets (including both material and social resources) and activities required for a means of living” (Ibid, 30). People’s livelihood needs and strategies (Scoones, 2009; Scoones, 1998; Chambers, 1995; Chambers and Conway, 1991) are a critical element in understanding the everyday. Rigg (2012, 186) explains, “Livelihoods research has attempted to get at the complexity of circumstances through mapping out the ‘capitals’ (financial, human, natural, physical and social) or assets that households bring to bear as they try to ‘get by’ in life, creating a bricolage of activities” which warrant consideration. The manner in which the capitals are viewed as important to different urban residents highlights the difficulty of referring to “urban residents” as if they were a homogeneous group. The necessity to consider the diversity of urban residents is reinforced through a focus on livelihoods strategies in their everyday lives.

The interest in ‘sustainable livelihoods’ is commonly attributed to a series of events beginning with the 1987 World Commission on Environment and Development Commission that produced the report, ‘Our Common Future’ (World Commission on Environment and Development, 1987). This report introduces the concepts of basic needs and sustainable livelihoods. In 1992, the United Nations Conference on Environment and Development further advocated sustainable development and ‘sustainable livelihoods for all’ by endorsing Agenda 21. Chambers and Conway’s (1991) discussion paper, ‘Sustainable rural livelihoods: practical concepts for the 21st century’ gave rise to the definition of sustainable livelihoods (Ibid, 26): “a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term”. Chambers and Conway’s paper led to the sustainable livelihoods framework or sustainable livelihoods approach made popular in the development sector by the 1997 UK Government White Paper on International Development. The core principles of the sustainable livelihoods approach are (Rigg 2007, 32):

- “A focus on people and communities rather than on structures and the national context
- A concern with seeing livelihoods in holistic terms crossing sectors, spaces, actors and institutions
- And a commitment to identifying the macro-linkages that are salient to understanding livelihoods”.

Research into livelihoods focuses on the complexity of everyday life and considers financial, human, natural, physical and social capitals and the relationship between the capitals. The focus on sustainable livelihoods that can cope and recover from stresses and shocks and can consider the future intersects with research on disasters. Varley argues that to continue regarding disasters as “exceptional events, calamities unrelated to the normal scheme of things” is no longer justified (1994a, 2). In the 1980s, vulnerability analysis of people and communities in the context of disaster research and mitigation was initiated. Vulnerability is a concept that links the relationship people maintain with their environment, social forces, institutions and the cultural values of people (Bankoff et al, 2004). The International Decade for Natural Disaster Reduction (1990 - 2000) explored the connection between disasters and the underlying social, environmental and political context (Varley, 1994b) in locations where people exposed to hazards live. This doctoral research bridges the relationship between development and disaster discourse but by “nurtur[ing] new habits of thinking” (McEwan 2009, 295), this research utilises a different conceptual framing through the concepts of the everyday and events.

In the resilience literature, the importance of scales was considered. Scale in relation to the everyday is also of relevance. Rankin (2004, 61) argues “Globalization theories overlook the economic, political and cultural practices taking place within households and communities”. Scales are impacting each other in a complex manner and there is a necessity to reflect on the interaction and complexity of their power relations. Through this research utilising the lens of livelihoods, ‘capitals’ (financial, human, natural, physical and social) and an attempt to understand of how scales influence each other, a space is created to discuss everyday lives of urban residents (establishing a component of the conceptual framework for research question one – what are the risk perceptions of residents in the city).

2.5 Urban informality

Informality as structures of power in the urban (Roy, 2009) is of relevance to this research. In this research, urban informality is defined as (Alsayyad and Roy 2004, 5):

“An organising urban logic... A logic that structures the very fabric of urban life [in much of the world]. It is a process of structuration that constitutes the rules of the game, determining the nature of transactions between individuals and institutions and within institutions”.

The urban environment is not only created by governmental plans and formally led by government but to a significant extent, the urban is managed through informality (Roy, 2009; Roy and AlSayyad, 2004; Bayat 2004). The concept of informality can be considered not only from the perspective of the individual but more importantly for this research, informality of the government and how urban space is informally controlled through legibility. Informality debates continue to evolve especially in the global South (AlSayyad, 2004; Roy and AlSayyad, 2004). “The binary distinction between formal and informal-economies, housing, settlements - often carries with it an implicit positive appraisal of formality and a devaluation of informality” in the global South (Lombard and Huxley 2011, 121). Viewing formality as aspirational perhaps is misleading because this may not be the goal of urban residents and the government involved. AlSayyad and Roy (2004, 5) highlight:

“The organizing divide is not so much that between formality and informality as the differentiation that exists within informality... The neoliberal state, of course deepens such forms of differentiation, fostering some form of informality and annihilating others. It is this uneven geography that requires us to pay attention to urban informality”.

The uneven geography of urban informality in the global South and its medium sized cities suggests a movement of people and local government towards an aspirational informal future. This future can be obtained at times in the present due to the informal avenues controlled by the government which open and close in the urban and makes itself known to only some urban residents.

2.5.1 Informality of people in the everyday

People are proactively taking actions to better their lives. People should not be considered as the passive poor; instead ordinary people are often utilising quiet encroachment in their everyday life. At times they want their actions to be noticed while at other times, they do not want to call attention to themselves and their individual actions. Bayat (2004, 91) considers quiet encroachment to be a:

“Quiet, gradual grassroots activism [which] tends to contest many fundamental aspects of state prerogatives including meaning of order, control of public space, access to public and private goods and the relevance of modernity... Often whole communities emerge as a result of intense struggles and negotiations between the poor and the authorities and elites in their daily lives”.

Due to the mass movement or activity of individuals in their everyday lives, they create social changes in urban structure and processes as well as changes that emerge in demography and in public policy. Bayat (2010, 19) expands his concept of quiet encroachment to include the concept of nonmovements:

“Collective actions of noncollective actors; they embody shared practices of large numbers of ordinary people whose fragmented but similar activities trigger much social change, even though these practices are rarely guided by an ideology or recognizable leaderships and organizations”.

These (non)movements of people through their parallel forms of collective action, even if unplanned, helps to give a lens to the urban of the ordinary city where practices are merged into the ordinary space of everyday life (Bayat, 2010). The necessity to pay attention to these activities is based on the “*power of big numbers*, [author’s italics] that is the consequential effect on norms and rules in society of many people simultaneously” (Ibid, 20) pushing for the same type of urban influence and change. The collective actions of noncollective actors can have significant impact on society producing “social changes in urban structure and processes, in demography, and in public policy” (Bayat 2004, 98). They wield power and ultimately force government to acknowledge people’s desires and actions. People are working together in ways not expected based on their histories, their identities in flux and being transformed through their struggle for a version of the city they envision.

As a point of clarification, the language of informality in relation to livelihoods may negate the agency of urban dwellers and has not been linked together in this literature review. Rather the focus of urban informality is on the everyday and collective action (in a range of forms). Benjamin argues (2004, 186), “denigration or dismissal of local economies as a transitory ‘informal’ sector misses out on the sophisticated economic systems in which poor groups are active agents and negotiate the complex interplay of economic and land strategies to survive”. The framing in an earlier section of the literature review on the everyday and livelihoods, strives to address the shortcomings mentioned by Benjamin. This is done in part by going beyond the language of ‘informal’ and ‘formal’ to identify key concerns and processes occurring in the everyday of the global South’s residents who are not destitute or the elite.

2.5.2 Informality of government

Urban informality could be viewed both “as a concept and a lived experience” (AlSayyad 2004, 15). According to AlSayyad, it is an organised logic that allows certain things to happen. In this interpretation, informality is not only the remit of the urban dwellers but also of the government. AlSayyad proposes that urban informality should be viewed within the context of globalization and liberalization, “urban informality does not simply consist of activity of the poor...it is an organized logic, which emerges under a paradigm of liberalization” (Ibid, 26). The macro level interacts with the actions on a local level; the scales are interacting in ways that appear to be fragmented (McFarlane, 2008) and at times problematic but not permanently fixed. Benjamin utilises similar language of informality but attaches it to local government by proposing “the porous bureaucracy allows agency of the poor to have impact” (2004, 184). The term “porous bureaucracy” captures the fluidity, but also the systemic organisation that provides access and ‘voice’ to many local groups not exclusively the poor. Benjamin (2004) proposes the messiness of local bureaucracies in local government creates the environment where ordinary urban inhabitants can influence the local government.

In cities of the global South, some local governments create a space for manoeuvring, where a particular type of gray space is enacted. It is not informality

precisely. It is rather an opening for social and political action that the government oversees, controls access to and decides the length of time the opening is there. This will be discussed in the empirical chapters. Yiftachel (2009) invokes the concept of 'gray space' as the practice of indefinitely positioning people between the 'lightness' of legality through urban membership and 'darkness' in Israel. Yiftachel (Ibid, 250) proposes this new politics of 'gray spacing' emerges from the struggle for informal development and "can provide a more accurate and critical lens with which to analyse the making of urban space in today's globalizing environment, marked by growing mobility, ethnic mixing and political uncertainty". Gray spacing is a power-laden process (Ibid) where the government and residents interact with each other and attempt to influence urban processes. Urban struggles and "identity transformations, and to the manner in which these are embedded within the material, discursive and political aspects of 'gray spacing'" (Ibid, 253) provides a lens to view the urban in many ordinary locations.

Ghertner (2011) contends government realigns channels by which (some chosen) urban residents can engage, access, influence and ultimately implement the government's bidding. Rather than using the concept of gray space, Ghertner develops the concept of 'new state spaces' in the context of India's capital city Delhi. Through the creation of 'new state spaces' the government constructed and in a sense gentrified parts of Delhi through the selection of urban middle classes to participate in certain projects. It is in this "array of state spaces [which] have arisen in postcolonial India that lie below the radar of formal planning" (Ibid, 505). Urban residents who not only share similar economic stature but also "shared cultural formation and positionality" (Ibid, 507) to the government officials are engaged with to further the government's agenda. Others, the unpropertied residents, are not invited. This "reconfiguration of urban governance structures – a respatialization of the state (Ibid, 515) is allowing the chosen (by the government) urban residents the opportunity to influence local government's decisions and implementation of land use and infrastructure provision as well as social norming. Invoking Yiftachel's understanding of gray space and Ghertner's concept of new state spaces, a line of inquiry is being created to explore the notion that a larger number of urban residents as well as the elite are learning from each other and other groups and have

“awareness of how to access and manipulate the state” (Ghertner 2011, 509) for their own collective benefit. The state is aware of this and seeks to manage it.

Roy (2009) also analyses the structure of urban informality in India; Roy proposes in the Indian context, not only are the rich and the poor informal but the government’s planning regime – “a state of deregulation, ambiguity, and exception” (Ibid, 76) is also informal. According to Roy (Ibid, 84), informality could be viewed as a “feature of structures of power” rather than a grassroots initiative associated with poverty and resistance. Urban informal governance operates through the government’s use of “unmapping of cities” (Ibid, 81) allowing the state to alter land use, and to acquire land being utilised by residents. In other locations of the global South such as Bharatpur Nepal, by the process of not having mapped in detail the city, “unmapping” never needs to be done, allowing the government to make decisions on urban planning including land use planning and infrastructure provision in a more unstructured manner. Thus the state “itself is a deeply informalized entity, one that actively utilize informality as an instrument of both accumulation and authority” (Ibid). Through the focus on urban planning whose main feature is informality, Roy suggests, there is a “certain territorial impossibility of governance, justice, and development” (Ibid). Roy suggests that informality is at the centre of the government and is a fundamental part of governing, this conceptualisation is supported by this research.

2.5.3 Governing legibility of the urban

Rigg (2007, 164) proposes, “The state may, to use Scott’s (1998) word, try to make the local ‘legible’ but it does this mainly to itself”. The state decides what to decipher and to what extent, often deciding that it is unable to or does not need to make the local level legible in order to manage it. Thus notions of informality, gray space, and porous bureaucracy all contribute to the framing of an environment where some residents of medium sized cities are visible and legible (to the government and to each other) and more formal than others. Simone (2004, 425) suggests that the international aid community is striving to support African municipalities in their efforts to “direct urban growth and restructuring. Here, capacity building centers on developing proficient forms of codification”; “spaces, activities, populations, flows,

and structures are made visible, or more precisely, recognizable and familiar” (Ibid, 426). The reasoning of the international aid community may be that only by making visible, are people and spaces, knowable and manageable. This is not the case in Nepal where the municipalities do not have the tools at their disposal to render all residents, all urban spaces, flows of people into the cities and other materialities visible. The central government governs who is legible, what urban materialities are important and how governing on a local level is allowed to take place.

The discussion about governing of people and spaces through visibility, is relevant because it may be the case that the government does not desire to make visible certain people and spaces. Thereby allowing the government to manage the gray space to its benefit without open conflict in the city. Also of relevance to this discussion are the new visions of urban space which “are practically imposed on those lower levels of the state that have for so long reinterpreted state plans to meet the demands of the poor” (Ghertner 2011, 505). There is a conflict between what some parts of the government want to create in their vision of the city and lower levels of the state that have the direct link with the residents. The lower levels of the state are torn between their allegiance to the government and their desire to support (some of) the residents they are engaging with.

The nature of state functioning is changing the urban fabric of the global South. Pieterse (2013, 14) suggests there is a more nuanced and complex story than neoliberal governmentality. He acknowledges that the state can be “exploitative, oppressive, exclusionary and violent... But simultaneously there is a multitude of other things occurring too; and if nothing else, the (local) state is a site of constant contestation, stabilisation, adaptation and re-legitimation through actors of learning and institutional recalibration.” Governance is a very fluid concept in the global South with many different stakeholders including the government, individuals, collectives as well as donors and INGOs (in many countries). In a report for the post-2015 development agenda, Revi and Rosenzweig (2013, 42) highlight that the power of “collective action by and across institutional groups [governments, private enterprises, civil society, and communities] can ensure a convergence of entitlements and public policy, enterprise and collective action to support this multi-dimensional

transition to an urban world”. Governing legibility of people, space and place is a fluid process where many stakeholders attempt to influence the government and the urban. This broader discussion of informality, not only of people but also the government and how it utilizes informality as part of its power structure helps to address research question two (how do residents address their perceived risks) and research question three (how do residents perceive the urban risk environment when events occur).

2.6 Cities as landscapes of risk

The urban setting in the global South possesses (Simone 2004, 408) “a thickening of fields, an assemblage of increasingly heterogeneous elements into more complicated collectives”. The urban setting is comprised of heterogeneous elements in terms of people, landscapes, physical infrastructure and social connections. The global South’s contextual landscape, (Mitlin and Satterthwaite, 2013) includes an urban setting where one fourth of all urban populations in most low- / middle- income nations live in poor quality (often insecure or illegal) homes with inadequate provision for water, sanitation and drainage. In addition to understanding the urban through the everyday with its focus on livelihoods as well as understanding informality both of residents and the government, the urban context can also be understood in other ways. The relationship between natural hazards that are made more threatening due to: higher levels of density in the city, haphazard planning, limited enforcement of building codes, influx of migrants who are tenants, increased reliance on local government services, insufficient access to water and electricity, increased risk of fires due to high density as well as poor road infrastructure warrants consideration (Dodman et al, 2013; Mitlin and Satterthwaite, 2013; Satterthwaite and Dodman, 2013).

Urban dwellers’ perception of risk² differs to ideas of risk and calculation, assessment and management of risk as internalized by governments, the international aid community as well as insurance providers. Thus a tension exists between

² For a condensed comprehensive review of the three major theoretical perspectives on risk, please see Lupton (1999, 1-6).

understanding how urban dwellers live ‘lives at risk’ (Wisner et al, 2004) in precarious vulnerable circumstances (i.e. low-income, lack of social support systems in the city, being tenants) and the adoption of, calculation of and management of risk as discussed in academic literature. “The scale and nature of urban risk depends on how risk is conceived” (Dodman et al 2013, 1). The city can be viewed in contrasting ways. These visions of a city and its components which are to be made visible can lead to conflicting interpretations of the city and the elements of risk that warrant governance. Pelling (2012) suggests that collaboration for risk management is problematic under these circumstances.

2.6.1 Social construction of risk perceptions

“Can we know the risks we face?” question Douglas and Wildavsky (1982, 1). They propose people “cannot be aware of most dangers at most times”. “People decide which risks to take and which to ignore” (Ibid). At times, risks are hidden, they are selected and then understood in varying ways due to their culture (Ibid). Douglas and Wildavsky suggest risk and perception of risk is socially constructed and there is a need to explore how risk is understood by people and the social structures or organisations which they are part of. They also stress that some types of danger are selected for attention and that this is based not only on individual but also the family, community and the more general social context people are part of. The “perception of risk is a social process. All society depends on combination of confidence and fear” (Ibid, 6) to guide selection of things to consider as a risk. “There is no gap between perception and reality” (Ibid, 8) and no correct answer regarding what is a risk and what is not. The social and cultural environment help to construct what is perceived a risk. Dombrowsky (1998, 20) suggests, “We see what we want to see” in terms of risks.

This research is utilising a social constructivist lens (Pidgeon et al 1992, 89) to propose risk perception:

“Involves people’s beliefs, attitudes, judgements and feelings, as well as the wider social or cultural values and dispositions that people adopt, towards hazards and their benefits. Hazards are defined here, following Kates & Kasperson (1983), as ‘threats to people and the things they value’. This view of perceived risk is intentionally broad, and takes account of the fact that it is characteristics of hazards, rather than some single abstract concept such as

risk, that people appear to evaluate. Furthermore, the perception of risk is multidimensional, with a particular hazard meaning different things to different people (depending, for example, upon their underlying value systems) and different things in different contexts. In some circumstances, important aspects of risk perception and acceptability involve judgements not just of the physical characteristics and consequences of an activity but also social and organizations factors such as the credibility and trustworthiness of risk management and regulatory institutions”.

Cannon et al (2014) suggest that societal attitudes and values lead to particular ways of perceiving and prioritising risks. Cultural attitudes and values also impact how people relate to others when dealing with risks (Ibid). Bankoff et al (2015, 1) propose “acknowledging people’s cultural production of risk, and their responses to it – how they perceive, experience and respond to disasters – can help us to better understand why people are affected by hazards and why they do or do not take action to minimise them”. This lens of conceptualising the production of risk can also be utilised to consider people’s interpretation of everyday risks and hazards as well as their response or lack of response. Bracken (2012, 23) suggests “risk shapes the fundamental basis of how we live our lives and interact in society. Risk is all pervasive within our environment, at a variety of scales and severity, on a daily basis, some of these risks we can avoid, but many others we learn to live with or choose to take”. Cook (Davies et al, 2012) suggests wealth in the global North has allowed us to recognize certain risks rather than others. “These risks exist in the developing world as well, they are simply overshadowed by other threats – among them subsistence and everyday life” (Ibid, 69). In the cities of the global South, social construction of risk perception focuses on the components of the everyday and contributes to the conceptual framework for research question one (what are the risk perceptions of residents in the city).

2.6.2 Risky events

Stressing the importance of context, the 2014 World Disasters Report Chapter 1 (Cannon et al 2014, 13) introduces the concept of risk by stating: “Risk is itself culturally-defined... [resulting in] the problem that DRR organisations sometimes have a different definition of risk from those of the people affected”. This can lead to risk perceptions and the needs of urban residents not being acknowledged when urban risk is explored and debated on state and global levels. There is a pressing

need to understand a fuller spectrum of risks in urban areas. In order to do so, it is worthwhile extending consideration beyond disasters and disaster risk management to “imagine and develop a more credible account of everyday urbanism” (Pieterse 2013, 12). This will broaden and deepen an understanding of urban risk in ordinary, typical cities of the world by engaging with residents more fully. In this rapidly changing urban setting, risk accumulates for some urban dwellers: through engagement with everyday occurrences, with hazards and also through engagement with events or risks which occur less frequently (Bull-Kamanga et al, 2003). In this research, the concept of events is defined as:

“Occurrences [that are] extraordinary, punctuating” and which “throw lives out of kilter” (Rigg 2007, 17).

Events as occurrences “may be atypical but understanding their impacts and effects requires that the events are embedded in everyday geographies which, perhaps only for a short time, become particular day geographies” (Rigg 2007, 17). Getz describes an event as “an occurrence at a given place and time; special set of circumstances; a noteworthy occurrence” (2007, 18). Birkland (1997) uses the phrase ‘focusing events’ to signify occurrences which by their sudden, unpredictable nature (earthquakes, hurricanes, oil spills and nuclear power plant accidents) can influence public policy-making processes. These focusing events make themselves known to the public and to policy makers simultaneously. Research question three “how do residents perceive the urban risk environment when events occur?” focuses on two events which are impacting urban residents in different ways. Events can cause people to respond affectively (Heise, 1979). People attempt to make sense of it, to accommodate the event. If the event produces undue strain, people attempt to anticipate subsequent developments and to formulate a course of action (Ibid). Together, perceptions of risks showcase an interconnected complex mixture leading to a difficult precarious situation for the majority of residents in the city.

2.6.3 Hazards and disasters

Four decades ago, O’Keefe et al (1976, 567) argued for the “removal of concepts of naturalness from natural disasters”. They insisted that disasters are never natural or induced by nature; hazard events need human intervention to become a disaster and

40 years later this message is still as relevant. In this research, the UNISDR (2015, 9) definition of hazard is utilised:

“A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards)”.

In the 1980s, vulnerability analysis of people and communities in the context of disaster research and mitigation brought people into the hazard and disaster discussion. Vulnerability is a concept that links the relationship people have with their environment to social context and institutions as well as the cultural values of people. The International Decade for Natural Disaster Reduction (1990-2000) explored the connection between disasters and the underlying social, environmental and political context (Varley, 1994b). Over two decades ago, Varley (1994a, 1) argued for drawing attention away from disasters, “from the exceptional to the everyday”. Varley echoed earlier arguments (Hewitt, 1983; O’Keefe et al, 1976) that to continue regarding disasters as “exceptional events, calamities unrelated to the normal scheme of things” is no longer justified (Ibid, 2). More recently, the discourse on resilience emphasises the role of people on a local level and the communities they create as an essential component to address a range of hazards as well as risks. There needs to be a renewed commitment to identify linkages between the everyday and more infrequent events or the (non) “exceptional” as Varley (Ibid, 2) describes disasters in order to support people facing such risks.

Lupton (1999, 17) differentiates between risks and hazards in the sense that while hazards “are ‘natural’ and neutral, risks are the value-laden judgements of human beings concerning these natural events or possibilities”. Natural hazards are categorised as hydro-meteorological/climatological, geophysical, biological / ecological and astronomical. Hazards are also compared through characteristics such as: “physical, chemical and or energy description of the hazard, magnitude and intensity, temporal characteristics, spatial characteristic and lastly predictabilities of the above characteristics and the quality of these predictions” according to Wisner et al (2012b, 173). By considering a more fine-grained view of hazards and disasters, it

becomes clearer that “disaster characteristics might not emerge directly from the hazard typology” (Ibid). Wisner et al argue, “People’s experiences of natural hazards are a form of knowledge, as is Western science” (Ibid, 172), suggesting that different disciplines, worldviews, knowledge, understanding and perceptions warrant consideration. This research suggests risk perceptions of urban residents are critical to the understanding of how cities, the everyday, risks, hazards and governing are intertwined and should not be considered in silos.

The understanding of the everyday and the relationship to comparatively rare events such as hazard events can be furthered by “doing credit to the importance of culture in risk and disaster contexts, [it also] means having to take the complex everyday dealings and livelihood activities of the people” into consideration (Bankoff et al 2015, 10). Everyday economic uncertainty and economic opportunities are more important for people than environmental risk and frequently do not justify focusing and preparing for an unlikely disaster (Wisner et al, 2004). The United Nations Development Programme (UNDP 2004) proposes access to predictable and higher levels of income can help to build resilience to disaster risk. According to the UNDP (Ibid, 60):

“Little is known of the detailed interaction of multiple hazards with livelihoods and coping strategies in cities. For individuals caught up in the immediate concerns of daily survival, disaster risk management is often not a priority”.

Disaster resilience is not a priority for most people living in cities. Their everyday lives are full of risk and uncertainty that requires navigation.

2.6.4 Understanding the risk context

Globally, 130 million people were exposed to earthquake risk annually between 1980-2001 (UNDP, 2004) with the largest number of deaths between 2006-2015 from earthquakes occurring in Asia (IFRC 2016, 238). Globally in 2015, the deadliest natural hazard events were the Gorkha earthquake (8,831 deaths) and a heat wave in France (3,275 deaths) (Ibid). In Nepal, the greatest natural hazards in terms of damage and mortality are earthquakes, floods, landslides, fires, lightning and epidemics (GofN et al, 2015). According to Dixit (pers comms), data for the past 45

years in Nepal show that small-scale, everyday, ‘extensive’ hazards result in an annual average of 618 deaths and destroy 6,133 houses. ‘Intensive’ higher magnitude disasters kill 145 people annually, and destroy 7,463 dwelling annually (information based on the National Society for Earthquake Technology - Nepal, DesInventar Database for 1971-2013). According to the Nepal Disaster Report (GofN et al, 2013), for the period of 1971-2012, there was a total of 23,391 deaths, primarily from epidemics (16,500 deaths), landslides (4,500), flood (4,059), lightning (1,200) and earthquakes (800). In the twelve year period between 2000-2012, epidemics and lightning (both related to monsoon conditions) combined killed the highest number of people and not earthquakes. Epidemics and lightning often do not register high on lists of disaster events and are not very visible to the international aid community in the way earthquakes and landslides are visible. In 2014, floods (128 people), landslides (113 people) and lightning (96 people) killed the most people and occurred primarily during the monsoon season (GofN et al, 2015). In 2015, the Gorkha earthquake was the most devastating natural hazard event.

Increasingly, the urban context is understood to be the site where hazards such as earthquakes and floods have the potential to impact millions of people (Smith, 2013; Wisner et al, 2012a; Wisner et al, 2004; Pelling, 2003). For example, the 2014 World Risk Report (UNU-EHS and Alliance Development Works, 2015) has a special focus on “Cities as an area of risk”; calculating disaster risk for 171 countries utilising four components (*exposure* to natural hazards, *susceptibility* depending on infrastructure, food and other variables, *coping capacities* and *adaptive capacities* related to future hazards and impact of climate change) (italics in original text). This consideration of cities as hubs of risk is important in Asia, where countries often identified as at risk from natural hazard induced disasters are located.

Urban risk can be interpreted in multiple ways. International understandings of urban risk is influenced by available data (Pelling, 2012) gathered on a national level; comparing urban risk by country is problematic because there are gaps in data collection and at times, the data is lacking. Dodman et al (2013, 5-6) expand on concepts of intensive risk and extensive risk based on frequency, scale and impact.

Intensive risk can be defined as “the risk from major disasters with the potential for 25 or more deaths and/or 600 or more houses destroyed or seriously damaged in one municipality/local government area.” Extensive risk can be defined as “the risk of premature death, injury/illness and impoverishment from all events whose impact is too small to be classified as a major disaster (or intensive disasters)”. Dodman et al (Ibid, 8) stress “that an interest in risk and cities today that focuses on low-income nations is faced with incomplete data about cities and even more incomplete data about the risk faced by low-income groups or groups in particular districts”. They highlight that for the urban poor, the highest levels of risk from everyday hazards are usually associated with poor-quality housing and a lack of infrastructure and municipal services. They also stress the importance of relationships between low-income communities and the local government as well as the importance of mainstreaming disaster risk reduction into development policies and urban planning on a municipal level (Ibid, 4).

The most recent Nepal Disaster Report (GoN, Ministry of Home Affairs, 2015), published biennially, considers Nepal rural in nature and is not disaggregating data on the basis of urban or rural. The implication is that data on risk in urban centres are not being properly considered as of yet. Fires are considered to be the primary urban hazard in Nepal (Ibid, 83) and the “exponential urbanization trend over the past decade with general disregard of earthquake-resistant measures in building construction is the cause of ever-increasing earthquake risk” (Ibid). There are few reports published focusing on Nepal’s urban risk with the exception of the World Bank report on urban growth and spatial transition in Nepal (Muzzini and Aparicio, 2013). Dodman et al use the language of extensive risks. In this research, the concept of ‘events’ has analytical purchase to describe the range of occurrences that can happen which may or may not have a long-term impact on urban risks.

2.6.5 Multi scalar urban governance and disasters

In addition to expanding the discussion of risk perception to include a wider range of hazards and other risks of the everyday, consideration needs to be given to the role of outsiders and experts. Cook suggests, following Beck and his work on the Risk Society, that “expertise becomes key to interpreting, but also bound up with

producing, these ‘new’ forms of risk” (Davies et al 2012, 69). There is marked difference in the way experts and people view and make decisions about risk (Haynes et al, 2008; Pidgeon et al, 1992). Often, the international aid community and other outsiders “hold different conceptions of risk in comparison to the priorities of the communities they are trying to help. However, these differences are not always self-evident or, if recognized, acknowledged” (Bankoff et al 2015, 7). This difference can lead to a mismatch between development and disaster risk reduction projects with proposed interventions that may not be of direct relevance to individuals. Risk is perceived and dealt with by urban residents in medium sized cities of the global South in ways that may not be understandable to ‘outsiders’. For decades, there has been a disconnect between how national governments, international agencies and the IAC intervene yet do not want to acknowledge the fundamental role of society and culture (Hewitt, 2012). “Risk management and disaster-related intervention should thus not be a sectoral understanding to mitigate threats but must entail a more holistic approach that takes the broad range of livelihood and lifeworld realities into account” (Bankoff et al 2015, 10). Until now, this has proved difficult to achieve.

In urban areas, there should be infrastructure and institutions including local government that protect urban residents from the impact of risky events and disasters. “However, poverty, political distortions and the uneven presence and capacity of civil society across a city mean that access to such protecting institutions and infrastructure is uneven” (Pelling 2012, 148). The relationship between government, governance, urban dwellers, social networks, the everyday and natural hazard induced disasters in the global South is full of tensions. Mitlin and Satterthwaite (2013) propose that the impact of disasters in the urban has been greatly underestimated on the low-income poor, in respect to damage to housing, disruption to livelihoods and loss of assets. Mitlin and Satterthwaite (Ibid, 141) argue that increasingly:

“Disasters in urban areas caused by extreme weather are concentrated in low- and middle-income nations and intimately linked to the inadequacies of local governance there. This might suggest that economic growth reduces disaster risk for cities – but it will only do so if it is accompanied by better local governance”.

Mitlin and Satterthwaite link the degree of management of urban development and the provision of infrastructure to the number and scale of disasters: “urban disaster risk is configured in most low- and middle-income nations by the lack of infrastructure and public services and the inadequacies of urban governance” (Ibid, 143). They continue by problematising the relationship between DRR initiatives and the local level (Ibid, 143): “Key local opportunities for disaster risk reduction are unrealized because many national disaster risk reduction initiatives do not have mechanisms for engaging effectively with local stakeholders” particularly urban dwellers. In addition to this, local governments are struggling to cope with an insufficient amount of financial resources required to meet their responsibilities in managing their cities. The range of local government expenditure per person per year for low-income nations is significantly lower than for other cities (Satterthwaite and Dodman, 2013). An environment where tensions exist between urban local authorities, stakeholders (such as INGOs) who influence the urban as well as residents and their struggles for livelihoods and other concerns is presented through this research. The literature framing cities as landscapes of risk contributes to framing research questions one (what are the risk perceptions of residents in the city) and three (how do residents perceive the urban risk environment when events occur)

2.7 Conclusion

The conceptual framing for this research project is driven by a desire to understand perceptions of risk in the city. The city, which is where the majority of the world’s population lives. There are complex and multiple layers of government, governance, individuals (with many of their basic unmet needs), group and forms of community who are all looking for openings. Openings that will allow their multiple, at times competing and intersecting agendas and manoeuvrings, to be enacted in the city (Simone). Parnell and Robinson (2012, 611) suggest an “alternative legitimate body of knowledge about cities” is warranted. Duffield argues (2007, 233-4) what is required is to learn “from their struggles for existence, identity and dignity and together challenging the world we live in”. The primary aim of this thesis is to understand perceptions of risk through considering people’s everyday, and by doing this we can see that hazard events and other events may or may not matter all that much to different residents in the city.

Disaster studies have tended to focus on the event that lies at the heart of the explanatory frame. Rather, this research begins with the everyday and then tracks or traces perceptions in time and in space to understand the ‘root causes’ and ‘context’ within which risk perceptions and strategies to address the risks are structured. This privileges the disaster as an event on the one hand, and considers everyday living as important on the other hand (Kruger et al, 2015; Cannon et al, 2014).



Figure 2.2: Conceptual framework for doctoral research

This thesis approaches the understanding of urban residents’ risk perceptions of the everyday, of hazards and also other events that occur less frequently. The doctoral study begins with the everyday (Rigg, 2007; Simone, 2014) and seeks to understand how an event and its effects are then shaped by cultures of living, rather than vice versa. The study, seeks to de-privilege the disaster so as to reveal the spaces of explanation that occupy the interstitial spaces that lie between and around the event itself. Resilience signposts a discursive set of effects. Resilience as a concept names

a variety of processes and frameworks to consider development, disaster risk reduction and also climate change in more joined and thoughtful ways. By situating urban dwellers at the centre, by considering the intersection of the everyday, livelihoods, the evolving urbanising context of ordinary medium sized cities of the world, by considering hazards, disasters and lastly, how the urban is influenced, a space is opened up to contemplating the intersection of these concepts together.

Chapter 3 Exploration

3.1 Introduction

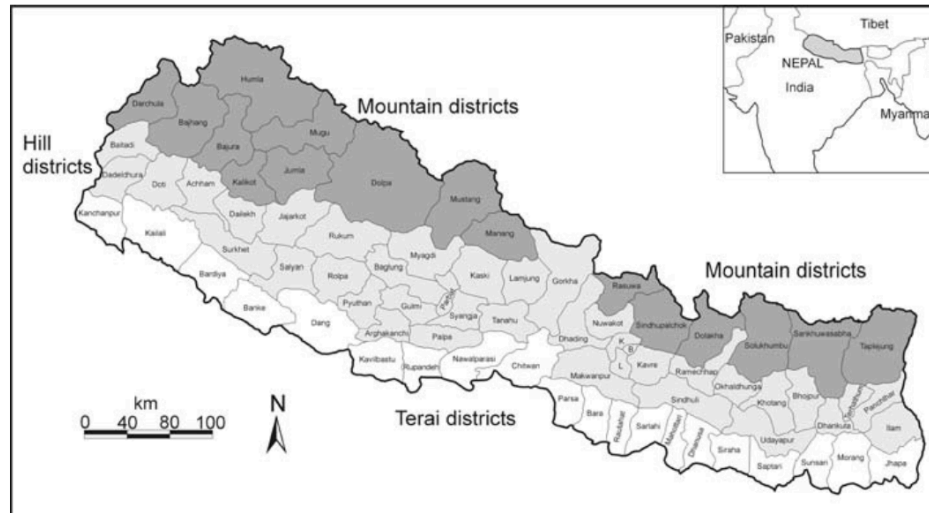
This research process has been intellectually challenging, emotionally tumultuous and physically tiring. The challenges included choosing an appropriate fieldwork location and a high magnitude earthquake forcing my evacuation from Nepal. My fieldwork plans were altered; I waited, adjusted my plans and at times made second best decisions throughout this doctoral research. Research in a post conflict country with *bandhas* (strikes where movement on the streets is restricted) also made fieldwork eventful. Attempting to shift this research from a hazards and disaster risk reduction focus to the everyday has been a process led by the interactions with respondents during fieldwork trips. The research has evolved based on the empirical findings and an iterative engagement with theory.

This chapter presents the epistemological framework for the research, the basis for understanding the decisions taken that structured the research project and how knowledge was produced. This chapter addresses the following topics: the location of the research, structure of the research project including partners, selection of fieldwork locations, and the intra-urban comparative approach adopted. Respondents, gatekeepers and assistants are described. Aspects of the research process are described including gaining consent. The qualitative methods are explored (semi structured interviews, the resource framework, focus groups, photographs and other methods). Methods for analysing and understanding the interconnectedness of different scales are explored. Positionality, identity, power and ethics of the research process are discussed. Lastly, reflections on the evolution of the research project, reciprocity and learning are considered.

3.2 Location of the research - Nepal

Nepal is a landlocked country bordering China to the north and India to the south, west and east. Nepal has a population of over 26 million people according to the most recent census of 2011 (GofN, National Planning Commission, 2012) and the World Bank states the population was almost 29 million in 2015 (World Bank,

2016). Ecologically, over 80 percent of Nepal is mountainous or hilly while the remaining 20 percent is in the low-lying fertile Terai. “Nepal is multi-ethnic, multi-lingual, multi-religious and multi-cultural country. The last census of 2011 revealed that there are 123 languages being spoken in Nepal whereas 125 Caste and ethnic” groups reside in Nepal (GofN and Disaster Preparedness Network-Nepal, Nepal Disaster Report, 2015, 2).



A map of Nepal showing the subdivision of the country into Mountain, Hill and Terai districts. Inset is a thumbnail map showing the location of Nepal within South Asia

Figure 3.1: Map of Nepal (Source: Petley et al 2007, 25)

The past 60 years have introduced significant changes to this former Hindu kingdom. Since democracy was introduced in 1990, Nepal has had over 23 governments. There has been much political and economic turmoil. The internal conflict from 1996-2006 resulted in over 13,000 deaths. It was in this context in which the last local elections were held in 1997. The mayors served their five-year term. In 2002, the king dissolved locally chosen representation in favour of centrally appointed officials working on a local level. He chose this course of action because the Maoists were gaining influence on a local level in many parts of the country and he did not want to lose control.

A new constitution was subsequently discussed as part of the agreement to end the conflict. From 2007 to 2015, there was a particular period of ‘transition’ where long

term planning was difficult to implement. There were two constituent assemblies tasked with drafting a constitution. Several attempts at drafting a constitution failed. In September 2015 (after the earthquake), the constituent assembly, comprised of 601 delegates³, created a constitution containing 35 parts, 308 articles and nine annexes. The three major ruling parties attempted to incorporate the requests of many ethnic and indigenous groups and created a federal structure that was originally conceived by the Maoists during the civil war.

In some aspects, Nepal has made significant development gains for its people; Nepal is viewed as a success story in terms of the Millennium Development Goals (MDGs) by the United Nations. According to the Millennium Development Goals Needs Assessment Report for Nepal 2010, (GofN, National Planning Commission and the UNDP, 2011) despite the decade-long conflict and political instability, progress has been significant in a number of areas. The MDGs such as education and mortality highlight the gains Nepal has made for its population although this has not been fairly distributed from the geographical dimension and income inequality is increasing as well. Poverty has been decreasing in Nepal very rapidly (GofN CBS 2012, 9 section 5). In 1995 – 1996, 41.8 percent of the population was living below the poverty line. In 2011, 25 percent of Nepalese people lived below the poverty line and the rate was much lower in urban areas, only 15.46 percent (Ibid, 4 of English version section 4.1).

In terms of poverty, it “is concentrated, regionally and ethnically, in the West and among the relatively landless. The Maoist rebellion was, to a large extent, about addressing identity-based discrimination, which lies at the basis of chronic poverty”, (Shepherd et al 2013, 61). Nightingale (2011, 154) explains: “The Maoists fought against inequality in caste, ethnicity and gender relations, along with geographical discrimination – all closely tied to economic disparities and class relations”. The Maoist People’s War (1996-2006) and “its attack on the Hindu monarchy culminated in the popular overthrow of the king (2006) and the formation of a Federal

³ Comprised of 240 elected, 335 via proportional representation and 26 nominated by the government

Democratic Republic (2008)” according to Nightingale and Rankin (2015, 162). Nightingale (2011, 154) explains, “the recently concluded Maoist People’s War in Nepal and the 2006 revolution that precipitated the overthrow of the monarchy have presented serious challenges to historically entrenched social and political hierarchies”. The 10-year internal armed conflict resulted in over 13,000 deaths and had a significant negative impact on the national socio – economic development during this time period.

3.2.1 Nepal’s economic security through remittances

Today, Nepal’s economy relies on a combination of agriculture (rice and wheat) which accounts for 30 percent of GDP, tourism and other services and most importantly, on remittances from migrant labourers in Malaysia, Qatar, Saudi Arabia, UAE and Kuwait (GofN, 2014). In 2000, remittances were 14 percent of GDP, in 2010 they were 22 percent, and most recently, in 2015, remittances contributed 32 percent of GDP. The national economy is increasingly dependent on labour moving abroad (World Bank, 2016). The sources of remittances are broken down as follows: 20 percent from within Nepal, 11 percent from migrants working in India and 69 percent from other countries - primarily Malaysia, Saudi Arabia and Qatar (GofN, CBS, NPC, 2011). Remittances are one of the factors behind Nepal’s remarkable success in human development in the last 40 years and have contributed significantly to the reduction of poverty since 1995 down to 23.8 percent in 2013 of the Nepalese population living below the poverty line (UNDP, 2017). The percentage of Nepalese households receiving remittance has increased from 23 percent in 1995 – 1996 to 56 percent of all households in 2010 – 2011 (GofN, 2011). According to the Large-Scale Migration and Remittance in Nepal: Issues, Challenges, and Opportunities World Bank Report, (World Bank 2011, 26) “almost half of all households in Nepal have either a current or returnee migrant”. This signifies how difficult it is to earn a livelihood in Nepal. The national economic situation is sufficiently precarious to force an “estimated 5 million Nepalis” (UNDP, 2017) (the majority of whom are young men) to leave their families and earn their livelihoods abroad.

For remittance receiving households, these flows represent nearly 40 percent of all income received (World Bank, 2011) and Chitwan district receives the third highest remittance amounts of all the 75 districts of Nepal (Ibid) although it is not one of the districts with the most outward migration. The high level of education in Chitwan district and the subsequent impact on higher income earned could be an explanation for this finding. This is in stark comparison to other parts of the Terai where the migration is of more poorly educated men who travel to India (Ibid). According to the World Bank (Ibid, 44), “the Brahman and Chettri, the traditionally high-caste groups, have high migration rates abroad and they received the largest amount of remittance per capita. Newars, even though they have low international migration rates, also received large amounts. The Terai groups earned significantly less. The discrepancy in per-capita remittance rates in these cases could be driven by the fact that most Newars who migrate, go to developed countries whereas most Madhesi middle castes migrate to India”, where they earn much less compared to other destinations.

3.2.2 The last decade

In the 2008 Constituent Assembly elections, a coalition led by the Maoist party (Communist Party of Nepal, Maoist-Centre) won a strong electoral presence on a platform of redistributive justice (Nightingale and Rankin, 2015). The constituent assembly, tasked with creating a new constitution, was unsuccessful and their deadline was extended four times. During this protracted period, the economic situation for Nepalese people continued to be difficult and is associated with increased migration, internally for security and externally for income generation. In 2012, the constituent assembly was dissolved. The World Bank stated that Nepal’s economic growth continues to be adversely affected by the political uncertainty (World Bank, 2013). In November 2013, a second Constituent Assembly was elected and tasked with creating a constitution. During 2006 – 2014, “the transition period has been characterized by political infighting and competition for power among a shifting array of political parties. Meanwhile, the country is still considerably dependent on multilateral development agencies promoting neoliberal economic models that are often at odds with some of the stated socialist reforms favored by the political centre in Nepal” (Nightingale and Rankin 2015, 162).

Nepal is urbanising rapidly (IFAD, 2014) with urban population growth rates of up to 7% p.a. (Muzzini and Aparicio, 2013). There are 2.5 million people living in the Kathmandu Valley (Ibid, 35). It is the first region in Nepal to face the unprecedented challenges of rapid urbanisation and modernisation at a metropolitan scale, and is also one of the fastest growing metropolitan areas in South Asia. The World Bank (Ibid) proposes that the sustainability of urbanisation in Nepal is threatened by a lack of effective planning and large and growing infrastructure deficits (including electricity and water). Expenditures are biased against Kathmandu and the largest cities, where infrastructure needs are the greatest (Ibid). Managing rapid urbanisation poses challenges that require policy attention. Rapid urbanisation has increased vulnerability to disasters, making Kathmandu one of the most earthquake-vulnerable cities in the world (World Bank, 2013; UNDP Bureau for Crisis Prevention and Recovery, 2004). Nepal needs to prioritise the “where, what, and how” of public investments based on development outcomes, enhance the competitiveness of strategic clusters to foster sustainable growth and create economic opportunities in urban areas, according to Elisa Muzzini, Senior Economist in the South Asia Urban and Water Unit (Muzzini and Aparicio, 2013).

In April and May of 2015 the earthquake sequence devastated the country. The summer of social unrest (protesting aspects of the constitution being proposed) in the Terai resulted in almost 50 deaths. In September 2015, unexpectedly, the constitution was promulgated although social unrest has not quieted. There has been mixed reactions to the constitution and amendments have been proposed to accommodate the Madhesi and Tharu ethnic groups of the Terai. “Nepal has been a highly centralized state, and in the post-conflict transition, tensions between governance at the centre and interpretations and resistance of state projects by rural populations is critical for understanding the roots of conflict as well as prospects for long-term political in/stability” (Nightingale and Rankin 2015, 163). Local elections for mayors will take place in the spring of 2017, for the first time since they were banned in 2002. Significant governance changes will be occurring on a local level throughout Nepal in 2017.

3.2.3 Bharatpur

Bharatpur is the fifth largest and one of the fastest growing municipalities in Nepal. It has developed as the main economic and social hub of the central region of Nepal. Bharatpur is located in the plains of Nepal, the Terai. Bharatpur's location on the Terai matters; geographically it is part of the plains but in identity it is not the Terai. Chitwan District, of which Bharatpur is the largest city, borders Bihar State, India. There is a Nepalese saying, "Chitwan is Nepal's 76th district" signifying how unique the city is due to its heterogeneity of inhabitants. Often, Chitwan, Narayanghat and Bharatpur are used interchangeably to signify the same location. Chitwan District is considered to be "safe and secure" from social unrest, unlike the remainder of the Terai. This may be due to the large proportion of high caste Brahmin and Chettri castes and the business oriented Newari ethnic groups residing in Bharatpur. These groups have strong cultural links with Kathmandu and the central government. Geography is about "difference and specificity" (Massey 1994, 118). Bharatpur and the Terai are about difference and specificity. The context to understanding safety and security warrants some historical background.

Bharatpur was created as a municipality in 1979. It was the first municipality of Chitwan District. Socially, Bharatpur is heterogeneous and rapidly changing due to inward migration. The migration into Bharatpur is from different districts, different ethnic groups, different castes, and different languages. Migration into Bharatpur has taken place over decades, with the first wave occurring in the 1960s when the national government initiated a campaign to move high caste Brahmins and Chettris from the hills to populate the malaria eradicated Terai. During the Maoist insurgency (1996-2006), the second wave of migration occurred when rural communities fled the hilly regions of Nepal and moved to Bharatpur with extended family networks for safety and security. The most recent wave of migrants is more diverse in their rationale for migration. Some migrate for a better quality of life and assimilate rapidly due to their caste and extended family networks. Others are currently fleeing from tension filled regions of the Terai and are settling in Bharatpur without the extended family networks. These tenants are finding it more difficult to access support systems in the city. They are the outsiders in a city full of aspiring newcomers.

According to the Bharatpur Municipal Profile 2014 (produced by the municipality), based on the census data of 2011, Bharatpur municipality primarily consists of people who have migrated from nearby rural areas and the western hills, although there are some indigenous groups such as Tharu, Darai, Kumal and Chepang. Bharatpur is a mixed community with different castes and ethnic groups however the main caste and ethnic groups are Brahmins, Chettris, Newars, Tamangs and Gurungs. In Narayanghat (the commercial district) the longest settled group is the Newars. The indigenous groups in the municipality are not very numerous. According to census data of 2011 (GofN, National Planning Commission Secretariat, 2012) the total population of Bharatpur municipality is 143,836. Over 77% of the population in Chitwan District was literate in 2011 (Sharma, 2014), one of the highest rates in the country and the rate in Bharatpur is most likely higher than in the rural areas of Chitwan District.

3.2.4 Bharatpur's economy and development

Bharatpur is located at the crossroads of the east – west highway and the north – south highway of Nepal (leading to Kathmandu) and there is significant road traffic bisecting the city (Figures 3.2 and 3.3 below).

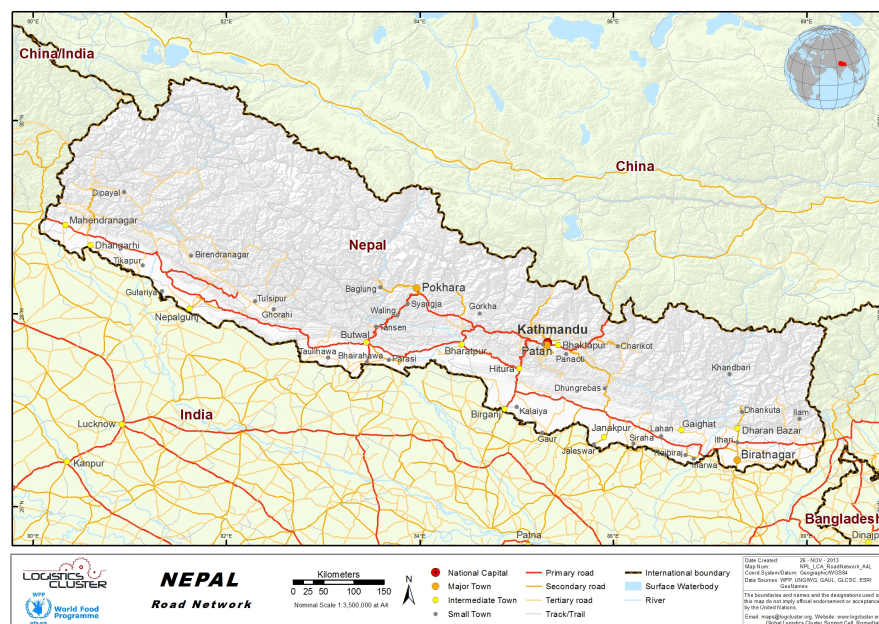


Figure 3.2: Nepal Road Network (Source: WFP, 2013)



Figure 3.3: Nepal's east-west motorway bisects Bharatpur

The economy of Bharatpur was traditionally dependent on agriculture but due to increasing migration there are emerging changes – fertile agricultural land is being utilised for housing and industrial development. The economy in Bharatpur is based on the following sectors: agricultural production (rice and maize), poultry, some light manufacturing (metal items, furniture production), service oriented businesses for the India bound trucks, an emerging private hospital sector, and also construction of houses. The construction sector has been steadily increasing since 2007. Most recently it has been accelerating, “it will not stop” according to a ward 11 shop keeper who sells construction materials for house construction. Another construction company explained that business has doubled in the last two years (2013-2015) and it will only increase in the future. This is due to the population increasing with people coming from the “outside” (from other districts such as Gorkha and Nawalparasi). From various accounts, 60% - 90% of house construction (pers comms) in Bharatpur is fuelled by remittances. The chief executive officer (CEO) of the municipality said 80-85% is from remittances. The municipal official responsible for earthquake construction stated “60% of funding for new house construction is from remittances in Arab countries, Qatar, Malaysia and Australia”. The representative of the Bharatpur Building Construction Enterprise Association stated that over 90% of new houses are financed by international remittances.

Lastly, the ward 11 secretary explained that a combination of remittances and selling of agricultural land pays for construction.

“There is no opportunity here”, according to the ward 11 retired army officer, “everyone is going outside [abroad]” for employment. There are different categories of international work as described by several respondents. For unskilled labourers, the young men generally travel to the Gulf countries. In the village Mangalpur (which was subsequently amalgamated into the sub metropolitan city), the women explained that “living is based on daily wages and remittances from Saudi Arabia” but there is no new house construction visible so the remittances are not very high. The Mangalpur Village Development committee (VDC) official explained, “Remittances are very important. They are fuelling the new boarding schools that have been established”. The more educated or those who can speak English can attempt to work in Malaysia. People who can pass the central government examination can work for high wages in Israel and South Korea. Bharatpur also has young men and women who travel abroad not for employment but educational opportunities in countries such as Japan, Australia or the USA. These individuals generally do not return to Bharatpur according to many respondents.

Bharatpur has changed demographically and politically during the 12 months of fieldwork in the city. Until November 2014, the Municipality had 14 wards and a population of 144,000. In December 2014, it was declared a sub metropolitan city with 29 wards and the population increased over 50% due to five amalgamated villages including their rural poverty and specific hazards and risks (periodic flooding and wild animal attacks). The Ministry of Federal Affairs and Local Development’s desire to transform Nepal from a rural country where 83% of the population lived in 2014 to an increasingly urban country where in 2016 40% of the population live in municipalities is straining the capacity of local authorities as well as putting additional financial and social pressures on residents. The population density of Bharatpur is 826 persons per sq. km (MoFALD pers comm). This is the lowest population density of all the municipalities comparable to Bharatpur in terms of population size. This can be a reflection of its location on the Terai and that

Bharatpur is a rapidly urbanising city with land available for development. Urban planning will be an issue for Bharatpur to address in the future.

Bharatpur is also attempting to implement the national building code for residential buildings: the municipality, with support from a non governmental organisation (NGO), is training engineers, associations, masons and house owners and has also established a roster of qualified and trained masons. The National Society for Earthquake Technology – Nepal (NSET) and the central government view Bharatpur as a national success story for earthquake resilient construction. This is due to the municipality's leadership and intent to implement the national building code and earthquake resistant construction. Success in increasing the number of new houses built to code has increased significantly since the Building Code Implementation Program of Nepal (BCIPN) project (implemented by NSET and funded by the United States Agency for International Development) began in Bharatpur in 2013 (Dixit et al, forthcoming).

3.3 Structuring the research

In this doctoral research, my research partners have been an important factor in the framing and evolution of the PhD. There was significant effort dedicated to selecting the site for empirical work and an attempt was made to interview a cross section of society in Bharatpur with an emphasis in the two primary wards of comparison. Mangalpur, a village southwest of the municipality provided an additional site of comparison. Additionally, municipal leaders and municipal officials were interviewed in Bharatpur. On a national level, senior government officials in Kathmandu, NGOs and representatives of the international aid community in Bharatpur, Kathmandu and the USA were interviewed.

3.3.1 Research partners

My research project has three partners with whom I engaged with in various ways over the life of the research: Durham University's Earthquakes without Frontiers (EwF) Project, a Nepalese organisation focused on earthquakes - NSET and its BCIPN project and lastly, the Nepal Risk Reduction Consortium (led by the

Government of Nepal and the United Nations) and its subgroup - Flagship 4 Community Based Disaster Risk Reduction initiatives. My initial research into urban community disaster resilience began in conjunction with a project of Durham University's Institute for Hazard, Risk and Resilience titled, "Earthquakes without Frontiers: A Partnership for Increasing Resilience to Seismic Hazard in the Continents". EwF provided me with an important focus for my initial research – I had an entry point for exploring the concept of resilience through a hazard – earthquakes in the urban context and linkages to disaster risk reduction. My fieldwork in Nepal was facilitated by one of the EwF Project partners, the National Society for Earthquake Technology - Nepal. NSET is very well respected in Nepal for their work on earthquake risk reduction and disaster mitigation and they facilitated access to my fieldwork site. They were instrumental in facilitating access to local authorities. My third partner for the research is Flagship 4, Community Based Disaster Risk Reduction of the Nepal Risk Reduction Consortium and they facilitated access to the IAC in Kathmandu. Flagship 4 partners⁴ and the GoN agreed on nine Minimum Characteristics⁵ that have been incorporated in disaster risk management projects and programmes. The minimum characteristics have attempted to bring uniformity and alignment to partners' efforts, facilitate learning and transfer of expertise. When this research project began, there was little expertise amongst the IAC on how to best work in the urban areas of Nepal in the field of disaster risk reduction. Historically, the IAC worked mainly in rural areas and on flood risk reduction. They were very keen to understand how urban communities were organised and how best to support urban community resilience to hazards and other

⁴ Flagship 4 partners are 26 development organizations working in community based disaster risk management in Nepal.



stresses. From my proposed research, NSET was particularly interested in the combination of:

1. Understanding the views of a variety of stakeholders in a local, district and national level
2. Information from different local contexts (urban core, semi-urban and a VDC)
3. Information from communities addressing hazards with different temporal aspects (floods and earthquakes)
4. Understanding the role of donor interventions in influencing local contexts.

These topics emerged as important because until 2014, little urban focused research had been completed outside of the Kathmandu Valley. The project's emphasis on situating urban residents at the centre of the research was of particular interest to the IAC.

3.3.2 Process of selecting fieldwork location

My Nepal fieldwork has been carried out over two years, beginning in the first months of the PhD. I have been on five separate trips, two of which were scoping trips to explore where my fieldwork could be carried out. Although I would have preferred to be in the fieldwork setting for longer periods thus enabling me to establish closer and possibly more substantive relationships with my informants, this did not occur and can be considered a limitation of my methodological approach. I undertook an iterative approach – of shorter trips (up to five weeks) over a longer period of time due to my personal caring responsibilities as a mother and wife. This was not ideal but I could not have a long uninterrupted fieldwork period. The iterative approach through shorter and more frequent visits allowed me to reflect on what I had experienced, read different bodies of literature and to reformulate my research and questioning based on my reflections between trips. The fact that I travelled to Bharatpur, my fieldwork site, three times gave me credibility with respondents. Returning to Bharatpur created trust with municipal officials and with some of the respondents whom I met several times in the two wards I was investigating. After the earthquake experience, I became known as “one of us”, thus facilitating more trust with respondents.

The first trip to Nepal in December 2013 had two goals: firstly to present my Masters by Research findings at a national urban conference and secondly to engage the national government and international aid community including practitioners with my research project and research questions. I sought their input into the formulation of the research questions and area of study with the aspiration of investigating a topic that would be of relevance to practitioners. This scoping trip was very beneficial for the development of my PhD. There was significant interest from the government and from the international aid community in my research project: the national level stakeholders did not fully understand the implications of urbanisation in Nepal, what the concept of community signified in the urbanising context of Nepal, how best to work in urbanising settings and whom to support in disaster risk reduction and resilience building initiatives in the urban context. Lastly, there was donor pressure to operationalise resilience in some manner, what this meant, if it was appropriate and how to do it were all unknowns to the international stakeholders and the national government counterparts they were working with.

In June 2014, I conducted a scoping trip to Bihar State, India to investigate the possibility of conducting a comparative analysis of community resilience between Kathmandu Valley and Patna (the capital of Bihar State) or the northern Bihar districts bordering Nepal. I had envisioned conducting a trans-local comparison of two large urban areas utilising McFarlane's approach to comparative urbanism (2010). Reflecting upon the India scoping trip led to my decision against conducting an international comparative analysis of two large urban areas. This subsequently led to renewed exploration of fieldwork sites in Nepal with support from NSET colleagues. After reviewing various options, I tentatively selected the city of Bharatpur, Nepal as my fieldwork site. My fieldwork trip to Bharatpur in November – December 2014 gave me the opportunity to engage with the local authorities, community stakeholders and to explore which parts of the city I wanted to research in depth.

3.3.3 Intra-urban comparison

Through this research, comparison is framing how the research sheds light on how different parts of the city interact within space and time as well as the relationship

between other scales. McFarlane (2010, 730) proposes using comparison “both to critically reflect on existing knowledge and theory, and to develop accounts of the city that broaden the discursive field”. Of importance is not only “*content*”, but an ongoing critical reflection on the *structures* through which knowledge of the urban is produced. Thinking comparison as a tool for creating new conversations and collaborations, for reading different traditions and connections” [italics in the original text] is what is required to further knowledge about the urban. By situating this research in a relatively new city, with parts of the city changing into very different forms, wards have different forms of relations within their own areas and with other parts of the city as well as beyond. Through this comparison, a space is created for new ways of thinking about the city. Ultimately, comparison can shed light on power, “the epistemic and institutionalised relations of power between different scholarly and non-scholarly communities within and between different cultures of knowledge production” (Ibid, 737). Space is opened up to consider how different residents live in the same city through comparison.

Bharatpur is rapidly urbanising and heterogeneous; a comparison within the city is a useful way of considering a city. As a conceptual tool, “intra-urban comparison” (McFarlane et al 2016, 2) allows for different parts of the city to show itself and also to present changes that are occurring. The flows of the city are different in various parts of the city and by documenting the changes and comparing, more attributes of the city and its residents are made visible in this research. An intra-urban comparative form of research allows for more detailed investigation of the research questions. Risk perceptions may be different based on location in the city and coping mechanisms to address risks in the city may be based on location. This approach yields more insight than a single case study ethnography would, partly due to my shorter but repeated fieldwork trips where I investigated the role of time in people’s risk perceptions and ways of coping.

McFarlane and Robinson argue that “new analytical strategies” (2012, 765) are needed to understand the urban in a comparative manner. The use of similarity and difference and recently, patterns for understanding connections and causality are invaluable due to what they can offer analysis. Robinson argues (2006, 62) “Must

we wait for social or spatial phenomena to become the same before we can learn from experiences in different kinds of places?”. McFarlane (2010, 728) proposes that we “focus on comparison as a means of learning through differences, rather than seeking out similarities”. Two primary sites were chosen due to their differences and the opportunities they offered for comparison. A third (but minor in terms of fieldwork time) site of comparison, Mangalpur, is considered in relation to the third research question (risk perception of events). Comparison as a conceptual and methodological tool has its limitations. For example, if different parts of the city were chosen, the resulting research would have possibly shed light on a different array of issues, concerns and ways of living. However, comparison in this research project was very useful both as a conceptual and methodological tool that opened up the opportunity to explore urban spaces through their differences and similarities.

Bharatpur reflects many characteristics associated with urbanising Nepal: it is a dynamic and heterogeneous city with a long-established population at its core, new affluent migrants building houses, migrants who fled conflict in their villages and towns in the nearby hill districts, new residents from nearby villages which are being amalgamated into the municipality as well as economic migrants from Bihar State, India. All of these residents have different connections to each other, to the government and to the urban environment (physical, economic, social and political). The newcomers to the city are heterogeneous; some assimilate rapidly due to their caste and extended family networks and finances. Others, who flee social tension and are forced to settle in Bharatpur without the extended family networks and finances must rent accommodations and find support systems more difficult to create. This urban 21st century Bharatpur offers opportunities to learn from its inhabitants: how people live and what expectations they have for the future. The oldest part of Bharatpur is known as Narayanghat (wards 1, 2, 5 and 6 are more sparsely populated and wards 3 and 4 are densely populated as well as possessing a dense assortment of built commercial and residential infrastructure). The newer part of Bharatpur is wards 7-14. The most recent wards to be created after the fieldwork started are located south and southwest of the municipal boundaries. Mangalpur (a rural VDC) is located south west of wards 4, 5 and 6. Figure 3.4 (below) shows the 14 wards of the municipality before it became a sub metropolitan city with 29 wards.

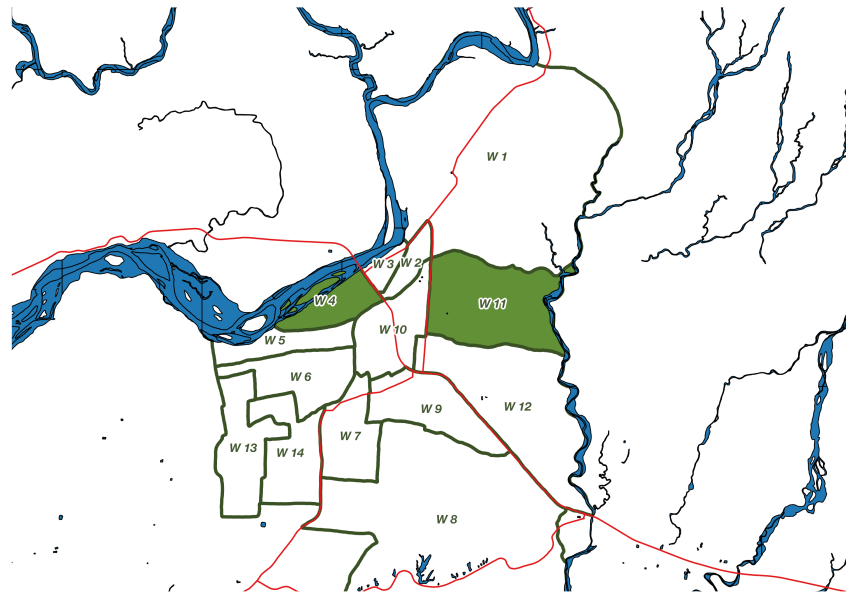


Figure 3.4: Bharatpur wards 1-14

The inductive approach is utilised in this research. Rigg (2012, 187) highlights the significance of the inductive approach “to understanding, interpreting and explaining development... need[ing] to start with people’s actions and choices, not with large questions which encourage large and simplified answers”. People’s everyday actions and decisions are complex, contextual and give rise to larger answers (Rigg, 2007) and this approach was adopted. Based on the November / December 2014 fieldwork trip to Bharatpur during which I investigated where to conduct a comparison, I decided to utilise Bharatpur’s wards 4 and 11 as my primary sites for comparison. In both wards, I wanted to understand hazard and risk perceptions of residents and also to attempt to understand what will help to keep respondents safe for the future. I decided on two primary sites of comparison due to similarities within the core urban areas and differences with the rapidly urbanising outskirts of the city. I chose wards 4 and 11 as the sites of comparison because they represent different forms of urbanisation, ethnic composition, levels of economic development, and potentially different sources of power and influence in the city. The two wards represent different socio-economic realities, the rates of urbanisation

are different, the physical infrastructure varies, and people's relationship with the local authority appears to be different. The photographs below in Figure 3.5-7 are of wards 4, 11 and Mangalpur.



Figure 3.5: Urban ward 4



Figure 3.6: Rapidly urbanising ward 11



Figure 3.7: Rural Mangalpur

Ward 11 has the highest population with over 21,000 inhabitants; ward 4 has 14,461 inhabitants. The village south of Bharatpur, Mangalpur, has 20,000 inhabitants and after it was amalgamated became wards 15-18. Ward 4 borders the river and the main highway; is full of commerce, tenants, migrants, small informal settlements and new homeowners. Ward 4 is the financial and business centre of the city; there are banks and financial cooperatives, retail businesses and light manufacturing. Ward 11 borders a forest and a by-pass road and is much less congested. Ward 11 is comprised of indigenous groups who have lived in Bharatpur for decades and new migrants who are purchasing agricultural land and building three storied houses (often with a shop on the ground floor). Mangalpur has the river as its western border. Flooding is a hazard the residents are very worried about. The riverbanks overflowed and flooded homes several years ago. There is a flood disaster risk reduction project focused on community resilience in Mangalpur that I interviewed

(before and after the earthquake). Residents in Mangalpur survive on agriculture and low levels of remittances from young men.

The following Table 3.1 presents the differences between the two wards I investigated.

	Ward 4	Ward 11
Setting	City centre	Rapidly urbanising ward, clean and quiet
Economic base	Business hub for the city including financial services, retail and vegetable wholesale markets, manufacturing and poultry industry. Evidence of child labour. Transportation hub (bus construction, Indian truck repair) and bus terminal for Western Nepal.	Fertile agricultural land rapidly disappearing Wood furniture and looms production as well as tailors Agricultural production including rice and maize Minimal manufacturing and retail
Identity to place	Narayanghat (older settlement)	Bharatpur (newer settlement)
Profile of residents	Mix of Brahmin, Chettri, Newars, Indians, Dalits	Predominately Brahmin and Chettri, some Dalits, remainder are ethnic groups such as Tamang, Gurung, indigenous Kumal
Migration trends into ward	Migration for business or due to Nepal's internal conflict. Migrants from Bihar India Migrants from southern Terai e.g. Birgunj or nearby hill districts e.g. Gorkha	Three waves of migration Migrants from nearby hill districts e.g. Gorkha
Ownership of dwelling	Tenants and home owners Some informal settlements	Mostly home owners
Community groups	Not many neighbourhood groups (possibly 18) active Women's Groups, active business groups	40-50 neighbourhood groups and some women's groups, they overlap geographically
Influencing power of ward	Minimal.	Significant.

Table 3.1: Comparing wards 4 and 11

The wards differ not only in their urban and rural aspects and economic portfolio. The composition of residents differs and there are many tenants in ward 4 while ward 11 had almost none. Neighbourhood groups are less visible in ward 4 while

women's groups are much more active. The opposite is the case in ward 11. Lastly, ward 4 has marginal influencing power on local authorities while all respondents considered ward 11 to be more influential than ward 4.

3.4 Respondents

In this section, I describe the range of respondents for this research. Some respondents in this research were valuable in providing an overview of the city, some respondents made connections to other scales and sources of power that influence the local level. Other respondents, especially those in wards 4 and 11 were essential in discussions about risk perceptions and coping mechanisms. The process of identifying respondents in wards 4 and 11 is described in detail as well as the types of questions that were posed and when (before or after the earthquake).

During this doctoral research, I found it difficult to label interviews: what constituted a formal interview or an informal interview. I engaged with some respondents multiple times, at times the interactions were formal and taped, in other situations they were informal interactions over a cup of tea where the conversation was less structured and led by the informant. Both forms were valuable and enriched the research by creating an environment where different types of interactions could take place. Often respondents asked me questions both personal and research related when the setting was more informal. They were interested to engage on a personal level that was more intimate than when the interview was recorded and formal. Often times this added nuance to the way they communicated their interpretations of risk perceptions and how they interacted in the city.

During the three fieldwork trips in Bharatpur, 42 people were interviewed in wards 4 and 11: 23 of whom are the key respondents for this doctoral research project. The other respondents in wards 4 and 11 informed my understanding of the urban context and risk perceptions. Seven focus group discussions (with neighbourhood groups and women's groups) in wards 4 and 11 also provide the empirical work for this study. In total, over 96 semi-structured interviews were conducted as part of this research project (42 semi-structured interviews in wards 4 and 11, 39 semi-structured interviews with local government officials and other respondents in

Bharatpur and lastly 15 semi-structured interviews with the international aid community). This total does not include the meetings, interviews and focus group discussions from the scoping trips to Kathmandu Valley, Pokhara, Nepal and Bihar, India.

3.4.1 Respondents on various scales

The structure of this research emphasises the point of view of residents, their identity in the city, the power structures they operate in and the struggles they encounter. McEwan questions “By what right and on whose authority does one claim to speak on behalf of others? On whose terms is space created in which they are allowed to speak” (2001, 96). A space for people’s everyday life and their perceptions of risk has been created at the centre of this research. The terms by which space was created where Bharatpur’s residents speak are my terms but effort has been made to reflect the views of residents in wards 4 and 11.

In addition to these respondents in wards 4 and 11 who I will describe shortly, I interacted with other respondents in the city and beyond. This was organised in order to understand the temporal and spatial scales of an urbanising city and how these scales interact and influence each other. There are influences on the lives of the respondents in wards 4 and 11 and an attempt to make visible these influences is part of the research project. “Reading up” or trying to interpret power structures and relationships (Massey, 1994) in the city and beyond its geographic boundaries allows for a more nuanced understanding of the issues residents face, how they cope and how other respondents influence the coping mechanisms of residents. These respondents include community leaders, government officials, as well as the international aid organisations that are engaging directly with the national government and on a local level with residents and the local authorities through local NGOs. These relations, as Massey proposes (Ibid, 5):

“Stretch beyond – the global as part of what constitutes the local, the outside as part of the inside. Such a view of place challenges any possibility of claims ... to timeless identities. The identities of place are always unfixed, contested and multiple”.

I conducted semi-structured interviews with local, district and national level

government officials, key stakeholders on a municipal level (a politician, radio station owner, a head teacher of a private school, teachers in private schools as well as state funded schools, nurses, women's group in wards 5 and 6, a housing NGO, business associations, representatives of the construction sector (masons and managers), engineers, residents in wards 3-6, as well as in wards 10-12 and lastly, residents in Mangalpur during the first fieldwork trip to Bharatpur. These interviews set the context for urbanisation, changing urban relationships, livelihood strategies, earthquake resistant construction initiatives, as well as national building code implementation barriers. The evolving relationships between government and businesses as well as the relationship between local authorities and residents was explored in these interviews. Interviews with the IAC involved in disaster risk reduction initiatives in Nepal were conducted. Interviews with donors were also conducted in order to understand how disaster resilience was viewed, how urban disaster resilience projects were being framed and how these international respondents understood the concept and formulation of urban communities. 39 semi-structured interviews were conducted with local government officials and other respondents in Bharatpur (mentioned above). Additionally, 15 semi-structured interviews were organised with the international aid community and donors in Bharatpur, Kathmandu and the USA.

Through this research project, a comparative investigation conducted in an inductive manner, grounded in the perceptions of residents, complemented by the opinions of community leaders, government officials and international aid practitioners is explored. "Research is always bound up in issues of power/knowledge and is, therefore, inherently political" (Crang and Cook 2007, 26). Different forms of knowledge are presented in this analysis; power is interpreted and presented by this thesis. From the individual scale (based on caste / ethnicity, gender, economic status among other factors) to the group level (participation in a neighbourhood group or not, whose voice is being heard in larger discussions) and to the differences in the two wards of the city, the complexity and intersection of scales is evident. From the local government perspective: the ward level secretaries struggled to represent the local authority to the people and simultaneously represent the interests of various people and groups to the local government. The municipal leader's (the chief

executive officer) allegiance was rooted with the central government that appointed him and to the local politicians who he needed to appease but not necessarily to residents. There are a variety of issues being raised on different scales and the ensuing challenging complexity of comparison (McFarlane, 2010) is visible in this urban focused empirical work. On a national and international scale, the national government, NGOs and the INGOs are keen to build resilience to disasters, focusing in part on community based disaster risk reduction initiatives, yet unclear how best to work in urban settings of Nepal. These different scales intersect in a rapidly changing environment where it is difficult to understand who has power in which situations to make a change for whose benefit.

3.4.2 Process of identifying respondents in wards 4 and 11

NSET chose Bharatpur as the pilot city to conduct the BCIPN Baseline Survey (“survey” from here onward) on Earthquake Risk Perception and Preparedness in October 2013. This survey of 2,000 residents from all 14 wards was an entry point for NSET to understand people’s risk perception of natural hazards as well as epidemics and fires. No dataset of this size and scope existed in Nepal when NSET started this risk perception survey in 2013. NSET allowed me to access the dataset for my research project. The data from the BCIPN Risk perception survey gave me insight into who lived in rapidly urbanising Bharatpur two years after the 2011 census was taken. The profile of the BCIPN respondents in terms of occupation, income, education, age, size of household are listed in Appendix A. This survey was very useful for me because it allowed me access to profiles of Bharatpur’s residents in an environment that was rapidly changing.

In preparation for my second fieldwork trip to Bharatpur in April 2015, I utilised the dataset to select respondents for my semi-structured interviews in wards 4 and 11. Before I started the research I did not have an understanding of how rapidly urbanising cities were structured, who had influence, power, who was more vulnerable to hazards and stresses, how society was structured, how social networks functioned and who was excluded in the urban. I was interested to interview a cross section of society in order to gain a broader understanding of risk perceptions and

coping mechanisms that urban residents possess. Excel spread sheets of potential respondents profiles included:

- Income levels at both extremes - male income none, male income less than 10,000 NR per month, and also male income 50,000 – 100,000 NR per month
- Male occupation business employment (most frequent male occupation)
- Female occupation student (frequent female occupation)
- Female occupation housewife (most frequent female occupation)
- Female head of households with more than 6 members of household (rare)

During implementation, there were significant frustrations using the survey profiles. My research assistant (P.) utilised these excel spread sheets to contact potential interviewees and once these spread sheets were quickly exhausted (due to issues mentioned in Appendix B), we utilised the list of all 185 survey contactable respondents from ward 4 and the list of all contactable 256 respondents from ward 11. Ultimately, we did interview a cross section of the population after we exhausted the BCIPN list. My research assistant and I tried to identify people who would match the criteria through personal contacts we had made during the three fieldwork trips in Bharatpur. In contrast to the frustrations mentioned, there were also benefits associated with utilising the survey for this research. Interaction with the survey enabled respondents to feel more comfortable with me. From their feedback, it appears respondents had a good experience with NSET and had learnt about earthquake preparedness. Respondents were willing to give me time and they gave me more information than I would have been able to get without this introduction. This was made clear by the quality of information I was given in interviews compared to people we interviewed in the two wards who had not been part of the survey.

3.4.3 Engaging with respondents

During the first fieldwork trip in Bharatpur (November – December 2014) I interviewed municipal stakeholders such as the representatives from the construction sector (engineers, masons, associations), officials from the municipality, home owners involved in training about ERC, representatives from schools, a college and

hospitals as well as women's groups in wards 5-6. In addition to establishing the context of Bharatpur, it became clear from discussions that everyday life was full of hazards and risks such as air pollution, road accidents and lack of local employment opportunities thus forcing young men to work internationally. Earthquakes and other natural hazards were not the priority for these respondents. The topics to be explored with the key respondents from wards 4 and 11 were developed after this fieldwork trip. Questions were created about the everyday and what people worry about as well as questions regarding the future and what would help to keep people safe. Interviewing the 23 key respondents occurred during two field trips (April 2015 – May 2015 and September – October 2015). Appendix C provides a general overview of the research project's 23 key respondents from wards 4 and 11 (who represent similar features to the NSET BCIPN risk perception survey where 2,000 households in Bharatpur were interviewed). These respondents can be considered indicative of the city based on their similarities to the BCIPN respondents. This is important for the research in an environment of rapid change and where the local authority is unclear who lives in Bharatpur. Appendix D includes detailed descriptions of the 23 key respondents from wards 4 and 11. Appendix E lists the interviews conducted during the fieldwork trips.

3.4.4 Choice of terminology

The words 'risk perceptions' were never utilised with key respondents in wards 4 and 11. The word 'worries' was utilised instead. In this research, the words 'worry' and 'concern' reflect the words 'risk perception'. The word 'resilience' was also not utilised with respondents on a local level in Bharatpur. Rather the word 'safety' was utilised. Resilience does not translate into Nepalese (Ruszczuk, 2014) and based on my experience in Nepal, safety was chosen after consultation with NSET, MoFALD and my research assistant. Appendix F lists the types of questions asked during the fieldwork trips. The questions were adjusted during each of the trips based on the knowledge gained from the previous trips.

The earthquake interrupted the fieldwork in April - May 2015 when I had hoped to interview all the key respondents in wards 4 and 11. Almost half of the respondents were subsequently interviewed after the earthquake. Table 3.2 (below) presents the

types of questions I asked respondents and when the interview took place, before or after the earthquake. I was cognisant of the timing of interviews when I analysed the data in order to consider what impact or relevance the earthquake made to people's responses. Hewitt (1995, 121) argues for defining "risks in context seem to involve and require a different *modus operandi*, methodologies and perspectives: a view not merely 'from below' but from within rather than outside communities, a capacity for sharing in their sense of crisis. One requires insight rather than oversight; a capacity to listen to, comprehend and interpret experience and circumstances expressed in the local languages and vernacular 'discourse,' rather than technical ones". Hewitt argues for listening to people whom are often most at risk and trying if need be to translate their views to other discourses. With this in mind, the language utilised was focused on "what do you worry about" and "what will keep you safe in the future" in relation to risk perceptions of the everyday and for the future. As a researcher, I am aware of the necessity to provide translations "from one to the other discourse" involved (Ibid). Rather than ask about what their perception of risk is, I asked, "what do you worry about today and in the future". I also asked "whose responsibility is it to keep you safe for the future, the individual, the community, the government or a combination". These questions provide the foundation for the thesis.

Timing and types of questions asked respondents in ward 4 and 11

Respondents (23)	Before (April 2015) or after earthquake (September – October 2015)	Everyday worries questions	What will keep you safe for future questions
Ward 4 (12 respondents)			
Rita Devi	Before and after	X	X
Ram Prasad	Before and after	X	X
Alam	Before	X	X
Hari Prasad	Before	X	X
Nani Maya	Before	X	X
Dilu	Before	X	
Female Shopkeeper	Before	X	X
Birgunj Shopkeeper	Before	X	X
Birgunj Shopkeeper's adult son	Before and after		X
Bike shop owner's adult son	Before and after		X
Hotel owner from the EU	Before	X	X
Young car washer	Before	X	X
Ward 11 (11 respondents)			
Ward 11 Home owner BCIPN	Before		X
Narayan	After	X	X
Prem	After	X	X
Laxmi	After	X	X
Shankar	After	X	X
Ward 11 Wife of Kumal migrant worker	After	X	
Ward 10/11 Retired army officer	After	X	X
Ward 11 Housewife on Jungle Road	After	X	X
Ward 11 Ministry businessman	After		X
Ward 11 University student	After	X	X
Ward 11 Construction supply shop owner	After		X

Table 3.2: Timing and types of questions asked respondents in wards 4 and 11

The individuals who live in wards 4 and 11 of Bharatpur are the anchors for my empirical work; I strived to understand their similarities, differences, worries, and approaches to everyday life and to the future. “If we pay attention to and think from the space” (Mohanty 2003, 510) and place they occupy in the urban, we can obtain a richer understanding of other spatial scales of urban orientation, the interplay between individuals, organisations, the government and other non-local actors who influence their environment. How residents in a rapidly urbanising context live their lives, what they prioritise and worry about, how they cope and consider the future is the basis for this research.

3.5 Research in practice

Before each trip, there were weeks of preparation: engaging with Kathmandu based partners and research assistants, communicating with other Nepalese and foreign researchers to understand recent political and environmental changes in Nepal including awareness of *bandhas*, warnings issued by the UK Government, monitoring level of aftershocks, university risk assessment forms, as well as health preparations such as vaccinations and anti malarial drugs. Often it was difficult to plan meetings until I arrived in country and then meetings could be arranged for the next day(s).

3.5.1 Gaining consent

NSET colleagues translated into the Nepalese language the English version of the documents prepared for the fieldwork trips (research questions, information sheets and consent form). Appendix G has the English version of the consent form (reviewed by the Department of Geography’s ethics committee) and the information sheets. The role played by NSET as a research partner and gatekeeper was invaluable. NSET drafted a letter of introduction to the Municipality on my behalf. This document facilitated access to local government officials and to some respondents in Bharatpur thus allowing entry to groups I would not have been able to access on my own. I verbally communicated a description of my research project in a way that was appropriate to the interviewee (Skelton, 2001) and the ethical statement to all the participants involved in the fieldwork before the interviews began. I received informed oral and or written informed consent from all the

interviewees (Banks and Scheyvens, 2014) and I highlighted the fact that I would give anonymity and utilise pseudonyms (Ibid). Most of the interviews were recorded with permission. In some situations, in the interest of putting the informant at ease (especially local government officials) I did not record the interview. If this occurred, I took notes during the meeting and then filled in gaps after the meeting with support from my research assistant. I also asked my research assistant for his reflections on the interviews. Informal conversations with participants in NSET's training programmes on earthquake resistant construction (masons and home owners), hotel employees, auto rickshaw drivers, tea stall owners and other individuals were invaluable for context setting. These types of conversations were not explicitly referred to in this thesis and were not counted as interviews.

3.5.2 Gatekeepers and research assistants

The type and detail of the data gathered during the fieldwork trips was based on having two types of gatekeepers (NSET BCIPN staff and local government) as well as two research assistants (T. and P.). The gatekeepers served a crucial role in framing the type of research that emerged from the fieldwork due to their role in establishing who I would ultimately gain access to interview (Banks and Scheyvens, 2014). At the start of my first trip to Bharatpur, one of my partners, NSET, asked their BCIPN project regional manager based in Bharatpur to facilitate access to the local government for me. This regional manager of NSET BCIPN ensured the municipality of Bharatpur facilitated access to key stakeholders in the community and also that one of the municipal staff who was familiar with urban planning would be my short-term research assistant. T. facilitated access to fellow government officials, municipal stakeholders and to the construction sector. During the first fieldwork trip (November – December 2014) he did not understand what I was trying to research and it was only after he participated in the Sendai Conference on Disaster Risk Reduction in March 2015 did T. more fully appreciate the importance of community groups, the role of women and the necessity for local government to engage with urban residents. He was much more interested in the research project after attending the Sendai Conference on disaster risk reduction.

After the first two weeks of my first fieldwork trip in Bharatpur, another person, P., became my research assistant. P. was a staff member of the Nepal School of Social Work (NSSW), a partner on the EwF project. The NSSW was very keen for P. to learn more about social science research techniques in order to then train students in these techniques (qualitative research is not common in Nepal). He was young, from an upper caste (Chhetri) family, interested in social work and spoke English extremely well. When P. first arrived, we discussed my research project and the Nepalese translations of the documents I had prepared. Language can be an insight into culture and relationships and is one way to begin to appreciate the nuances of another person's world view (Geddes, 2002). I was acutely aware of possibilities for misinterpretation that can lead to inappropriate or invalid data and regularly asked my research assistant for clarification on terminology and tone of conversations. P. facilitated access to respondents in wards 4 and 11, community groups and informal discussions with many different types of residents during three fieldwork trips. P.'s participation was essential to the research and he actively influenced the research process due to his insights and willingness to explore the research topic and to engage with a wide range of respondents. I trusted his interpretation and translation skills.

The issue of how far to involve the interpreter in the research project is addressed by Temple and Young (2004). In reality, P. was an additional set of "eyes and ears" for me and functioned as my "cultural broker" (Ibid, 171). I valued his opinion on cultural, social, technical and environmental topics; I was heavily dependent on his willingness to engage with the research project and only by working together was the fieldwork successful (Turner, 2010). His positionality based on his views and attitudes towards the topics discussed and the respondents interviewed had consequences on the way he interpreted and clarified any queries and concerns that I had during the fieldwork. For example, he was able to engage freely with men in a way that was closed to me. When respondents asked him if I was trustworthy or acceptable to engage with, he would explain who I was and what I wanted to learn. The combination of project partners, gatekeepers and research assistants significantly impacted the type of research conducted.

3.6 Methods

After my research questions were formulated, I investigated using a variety of qualitative research methods (Robson, 2011) such as semi structured interviews, focus groups, photography, as well as observing the daily flow of life in the two wards. Triangulating findings between the different research methods was useful to give substance, nuance and credibility to the findings.

3.6.1 Semi-structured interviews

Semi-structured interviews were utilised in order to have the flexibility to explore a variety of topics in depth (Crang and Cook, 2007). In the first fieldwork trip in Bharatpur, interviews were focused on understanding the urban context of Bharatpur, the key issues in the city as well as hazards and risks in the urban context. Initial questioning regarding what would help keep residents safe for the future based on their view of hazards and risks was explored. Crang and Cook (Ibid) propose pilot testing questions, I pilot tested risk perception questions in the first fieldwork trip on the municipal officials and municipal stakeholders (politicians, nurses, teachers, business associations). Subsequently, questions evolved and were modified for the key respondents in wards 4 and 11. After the first fieldwork trip, questions were adapted to include everyday priorities and understandings of how people cope in the everyday. Initiating investigation with a hazard focus was not particularly fruitful. This was due to the fact people were not particularly worried about hazards such as earthquakes and flooding in Bharatpur and the research project needed to evolve taking this into account.

The resources framework (social, human, economic, environment, physical infrastructure and government) was used as a methodological tool due to its holistic conception of inter linkages and acknowledgement of intersections of scales. The resources framework was piloted with masons being trained by NSET in November – December 2015 as well as with project staff of NSET BCIPN working in Bharatpur. The range of resources, labels, colours (human - yellow, government - blue, economic - red, social - orange, physical infrastructure - white and environment – green) and images for each resource were chosen in consultation with NSET BCIPN staff (Figure 3.8 below).



Figure 3.8: Resources to discuss “what will keep you safe for the future?”

By asking the 23 respondents from wards 4 and 11 what they viewed as essential to keep them safe for the future, how they described the resources and the components of each resource, the relationships between the resources and possible hierarchy of resources gave insight into understanding the concepts of individual and community safety in the two wards. The resource approach provoked discussion with the respondents regarding what is important to people and the ways in which the resources intersect, overlap or do not relate to each other. When the resource framework was initially used in semi-structured interviews with the respondents, government and politics were grouped together on one circle. This was an error on my side that was rectified after the first three interviews and after consultation with my research assistant. Politics overshadowed most issues and most people do not have much impact on politics. Eliminating politics impacted the way respondents considered the government resource; people spoke of government more often and considered the government as an important component of what will keep them safe for the future. During this research project, the resource framework was utilised with 21 out of 23 respondents.

In addition to asking about the future and what will keep people safe, questions were developed about the everyday. The respondents were more worried about everyday concerns than the future. Based on interviews conducted with key municipality officials, community leaders such as teachers, nurses, masons, engineers, and informal conversations with ward 4 and 11 residents (such as tea shop owners, shop keepers, day labourers, retired men) the ten most frequent topics were put onto colour coded circles. The range of everyday worries (education, employment, savings, loans, health, family, house, roads, electricity and water) was shown to ward 4 and 11 respondents (Figure 3.9 below). My research assistant explained to the interviewee the purpose of the exercise and the person then organised the everyday worries circles in some type of a hierarchy, including all or some of the issues the person was concerned with. Some people stated there was only one topic that was of concern while others included all the topics.



Figure 3.9: Everyday worries

The local government officials, district level official and central level government official provided an overview of how government functions on the different levels, the segregation of duties for development related issues and for disaster risk

reduction. The relationship between ministries on a central level and the relationship between departments of the local authorities was considered. Lastly, the relationship between the public sector and urban residents was discussed not only in relation to earthquake resistant construction but also in regards to the everyday functioning of the city. In discussions with the international aid community the interviews created insight into the difficulties of understanding the Nepal urban context as well as how the IAC is utilising the concept of resilience in its various forms (disaster and community).

3.6.2 Focus groups

Focus groups are a useful complementary tool to semi-structured interviews. Stewart and Shamdasani (1990) highlight the value of focus groups in exploring an unknown topic. This is the manner in which I used focus groups and they created a space where I learnt about issues in the community. I also learned about group dynamics between participants in the focus group and within the larger community. Seven focus group discussions were organised in wards 4 and 11 with community groups including neighbourhood groups called *tole level* organisations and women's groups. Organisationally, focus groups were somewhat problematic. They often required several phone calls to gatekeepers and postponements due to conflicting commitments. Often times, the settings were public spaces in the neighbourhoods where residents lived, in front of an audience. The participants themselves suggested these spaces. I found such public spaces difficult to manage at times due to frequent interruptions by individuals who wanted to engage with the ongoing discussion.

The following focus group format was incrementally developed on a community level: We began the focus group by introducing ourselves and the research, we asked participants to introduce themselves, how long they had lived in the ward and to describe their neighbourhood group or women's group. Then we distributed the six circles to each participant (we had nine sets of circles) and we started the focus group questions, "Do any or all of these six factors keep you and your community safe for the future? Is there anything else that needs to be considered?" There was a natural progression of topics thus allowing the participants to be comfortable and to

understand the evolution of the focus group discussion. The six resources, the coloured laminated “circles” were a very useful tool to engage people; they smiled, laughed and seemed to enjoy the exercise. In most focus group discussions carried out with low level organisations, women were silent and did not contribute. In focus group discussions with women’s groups, women were much more vocal but generally, one or two women were active and the remainder were silent. Focus groups were particularly useful as a window into interpersonal and group dynamics where the power dynamics were not only between the researcher and the participants but also within the group, often with one participant [generally a man] dominating the discussion “claim[ing] authority to represent the views of others” (Bedford and Burger 2001, 125). Attempts were made to ask women questions directly, thus creating a space for them to express their views.

3.6.3 Photography

Visual methods in the form of photography were a key method for exploring the city and its residents. Attempts were made to take images of respondents, fieldwork sites and photographs that represented regularly occurring images or scenes in the communities. Crang and Cook propose that photographs taken “in the field” (2007, 106) can usefully complement the writing of field notes. Photographs can become a record and highlight to the viewer what became normal in the fieldwork setting because the researcher may become desensitised to the surroundings. “The photos force us to consider the status of reality and its representation” (De Boeck and Plissart 2014, 9); photography assisted in freezing my opinion of a certain moment in time in an urban environment that was changing rapidly. Sorting through images and deciding what I find relevant to the thesis has been valuable to me in understanding and making sense of my research. The photographs also provided a visual record of the evolution of my thinking over an extended period of months and thus helped to adjust my research questions. Permission to take photographs of all the respondents was requested and granted in almost all cases (the exceptions were when people felt they were dressed informally). During the second and third fieldwork trips, I revisited respondents from the previous fieldwork trips and gave them photographs I printed from our interviews. People appreciated the gesture and the photographs. It was also a way to reengage with people in an informal manner. I

have created bounded photo books of fieldwork trips based on these images. My photo books are an invaluable communication and dissemination tool to discuss aspects of the research including context for the research, emerging urban issues, hazards and risks, profile of respondents as well as documenting methods used in the research. I have utilised the books to communicate and share my research in the UK, USA, Nepal and in India (pre and post earthquake).

During the first fieldwork to Bharatpur, I tried to use a participatory approach to photography which Crang and Cook described as “autophotography” (2007, 111). Disposable cameras were given to five individuals of different profiles in both wards 4 and 11. They included a female president of a neighbourhood group in ward 11, a male president of a neighbourhood group in ward 4, a male schoolteacher who was building a home, a president of a women’s group in ward 11 and a man who was building a home. They were asked to record what worries them, where they find their strength and makes them feel safe for the future. These are the same topics addressed in interviews and the purpose was to see if there would be new or a different insight through a visual tool. This would have been a complimentary tool to the resources approach because I had hoped that it would highlight residents’ views as to what gives them strength. The disposable cameras were an attempt to “locate control of process and representation with respondents” (Crang 2009, 8) rather than with me. I had hoped to return to these individuals in the subsequent trips and discuss their opinions.

In practice, the disposable cameras were problematic due to issues of power and purpose; some of the individuals were hesitant to take photos because they did not understand how the images would be utilised and by whom. This we found out in the subsequent trip. Due to the earthquake in the following fieldwork trip, I was only able to meet one of the individuals (Ram Prasad) who used a disposable camera to discuss the images created in his Citizens Village tole in ward 4. We discussed his images highlighting concerns, priorities and sources of strength in the city centre, it was an effective methodology not only for the images created but also the narrative he created regarding the photographs. Not all methods are uniformly effective in contributing new knowledge.

3.6.4 Other methods

A reflective electronic field diary was utilised throughout the fieldwork period. This was an essential tool for the scoping trips and the three fieldwork trips highlighting my evolving knowledge, thoughts, emotions and opinions (Storey, 1997). Descriptions of the physical and emotional space I was occupying were important because change was so rapid in Bharatpur; the diaries allowed me to glimpse back in time to understand the context and subsequent changes. This diary was useful when analysis of the data began. Detailed field notes were also taken during and after the interviews. Although these activities were time consuming, the notes and diary were valuable when transcribing and analysing the data produced because I was able to recall information and insights that I had forgotten.

Each fieldwork trip presented a drastically changed environment in Nepal and in Bharatpur specifically. Due to rapid housing construction, parts of the city had a different appearance each fieldwork trip. The exceptional in my everyday understanding is frequently the ordinary in Nepal (the daily 12-hour electrical shortages, wedding ‘seasons’, frequent strikes (*bandhas*) with little movement on the streets and cancelled meetings). There seemed to be one disruption after another: the weather, political tensions, the municipal borders changing, the earthquake, aftershocks, promulgation of the constitution, and the blockade of the Nepal-India border. Some were regular occurrences, while others were dramatic disruptions and are subsequently labelled events in this thesis. The fieldwork diaries and reports to supervisors were a mechanism to process understandings of this changing environment.

I walked long distances in both wards where I conducted my interviews. I took transect walks with respondents from each ward in order to gain knowledge of the wards, the profile of residents and their priorities (including where key infrastructure such as schools, shops, temples and ward offices were located). These transect walks provided essential background information regarding physical hazards, building codes enforcement, patterns of new construction and understanding the context for everyday living. I tried to spend as much time as possible in the wards in

order for people to be comfortable with my presence in their neighbourhoods. Collectively, these mixed qualitative methods offered a rich combination of tools to utilise and explore a range of topics. Through this combination of methods I was able to triangulate data and information thus making a more informed opinion about emerging themes and topics. Other methods could have been utilised but this range of methods was appropriate for this doctoral research and provided a rich and sufficiently detailed understanding not only of the urban risk perception context but also how people strive to address the issues they perceive to be relevant in a city such as Bharatpur.

3.6.5 Analysis and understanding different scales

I transcribed all of the ward 4 and 11 respondent, government, municipal stakeholder and IAC interviews. There was value in this significant amount of transcribing: I heard the context for the interviews including the sound of children, mobile phones ringing, chickens, the weddings and the rain. I reviewed transcripts, notes from all the interviews conducted, fieldwork diaries, photographs, maps I created and lastly my fieldwork reports to supervisors. These fieldwork reports were useful tools to process the fieldwork trips and to consider emerging themes. When I began to review the data from the 23 respondents from ward 4 and 11, I was quickly overwhelmed by the volume and messiness of the data and my attempt to understand people's perceptions of everyday risks and the future on an individual and community level (Appendix H has a photograph of a map of the 23 respondents and their location in the city).

Clarity, simplicity, certainty do not exist when considering the views of the individual, the community level, the ward and then the city. Information and clues about the urban hide and reveal themselves at different scales of analysis. Information on a ward level obfuscates the range of opinions of everyday worries based on gender, caste, home ownership status and access into community groups. Information presented on a ward level or on a summary level gives the data a level of finality and clarity that is unravelled when viewing the details on an individual or family level. Priorities, concerns and coping strategies at times differ, blend and then separate on the various scales. Interpreting the data is complex and

uncomfortable due to necessity to make decisions on which respondents to make visible and which voices to create a space for. This creates uncertainty regarding which scale is most important and which scale reveals messages, insights, trends that need to be acknowledged, explored and possibly considered in more detail in this research project.

The data was coded, categorised, and analysed through the use of an inductive technique (Crang, 2005); I created my own coding system using word documents based on emerging themes, phrases people utilised as well as types of respondents. The ‘codes come out of the data’ (Glaser and Strauss, 1967) and I regularly adjusted the coding system based on my evolving analysis of the data, codes and emerging themes (Appendix I is a photograph of the emerging codes for the future and Appendix J is a photograph of the emerging codes for everyday risks). In addition to coding on my computer, I also used a paper-based method consisting of post it notes containing ideas generated by the coding process, or ideas needing further consideration.

Writing the thesis and making a claim based on the data is a difficult component of the research process. Cook (Davies et al 2012, 72) suggests, “It is easy to forget that academic writing is a sanitized product that is produced over months (or longer) and has had numerous revisions and people to provide comments”. This idea of a sanitised product that has been revised, co-produced in a sense and reproduced in different ways for different audiences is an issue that I have reflected on many times during the research process. Whose story am I telling, for what purpose and what do I want to gain through this production of knowledge are questions that I have struggled with through the research experience and which continue to prod me.

3.7 Positionality

In cross-cultural research, Skelton (2001) proposes that there are issues of positionality, power and race. She includes in the definition of positionality components such as our race, gender, levels of education, sexuality, age and whether we have children or not. By considering positionality we acknowledge and problematise the role the researcher has in molding and influencing the research

process, type, quality and quantity of data generation and outcome. Through this PhD research project, I strived to challenge myself and to build my capacity as a critical thinker on issues related to urbanising cities in the global South, everyday life and what constitutes a disaster and for whom. My positionality is impacted by my work history and personal background. The efforts over the past four years (including my master's research on community resilience) have been based on knowledge created in part to over ten years working for the United Nations on livelihoods projects as well as living and working in different geographical contexts with different government structures. Most of my adult life has been spent living in countries that are not my birthplace. I have been an 'other' and have been acutely aware of my differences which may result in misunderstandings. I have tried to compensate for my lack of understanding the languages and culture by engaging on an on-going basis with practitioners and researchers from Nepal or those who have conducted research in Nepal, by reading Nepalese literature and engaging in other cultural aspects.

3.7.1 Identity

My subjectivity and initial desire to solve a problem (how to operationalise resilience) coloured my initial exploration of resilience; my former practitioner background was a factor in the formulation of the research. I was not particularly comfortable with the messiness of the research questions and the knowledge that I will not solve a problem through the PhD research process. Over time this changed due to my engagement with different bodies of literature. My background influenced my thinking but engaging in academia gave me the mental space, freedom to engage critically with all that I had presumed to be fact. Learning how concepts come into being and the power of words to influence new fields and new ways of thinking and working has been a vital discovery. In the future, I will attempt to engage critically and explore where and why new concepts gain traction. My positionality as a woman, a wife and a mother with discreet periods for fieldwork impacted how and with whom I conducted my research. I was acutely aware and recognised "the roles positionality and power play" in a research project (Skelton 2001, 92).

The manner in which I gained legitimacy was negotiated and influenced by the introduction and identity practitioners, NSET, the municipal gatekeeper as well as my research assistant created for me during the fieldwork trips. The description of my background changed each fieldwork trip and also changed depending on the background of the informant. Navaro-Yashin (2012, xii) argues, “That only certain spaces and themes make themselves available and accessible for study by certain people. The people whom we call our “respondents” always study us back, allowing certain engagements and blocking others”. Navaro-Yashin’s words rang true during my fieldwork. People were making decisions how to present me and possible respondents were deciding how to engage with me and what to share.

In December 2013, I was introduced as the former United Nations person who understood the practitioners, who previously conducted research in the Kathmandu Valley and who came back to share findings. In June 2014, travelling through Bihar State India, I was known as a practitioner with years of development experience in livelihoods. During my first fieldwork trip to Bharatpur, I was the research student everyone was helping (thus opening up a space for people to be comfortable with my lack of knowledge about Bharatpur). During my second fieldwork trip to Bharatpur, the municipality and my research assistant explained, that I was helping the municipality to learn how to work with and communicate with residents of Bharatpur (thereby giving the respondents an opportunity to influence the local government). My link with a Kathmandu based organisation (NSET and its BCIPN project) helped to give me credibility by association throughout my fieldwork trips. In my last fieldwork trip, in September 2015, I was introduced as the researcher who has been in Bharatpur several times and had been in Bharatpur during the earthquake. Participating in the earthquake gave me an acceptance in the community (I had felt the shaking but returned to Bharatpur).

During the second and third fieldwork trips, people remembered me and were pleased I had come back to Bharatpur. People were very willing to meet again. Over time, I had credibility not only by association but because I had returned, brought photographs to the people I interviewed and met with some respondents at least during two fieldwork trips. Navaro-Yashin describes being positioned as “both

inside and outside, a way to perceive and look from more than one angle at any one time” (2012, xii). My multiple identities and changing interactions during the course of fieldwork allowed me to engage with a wide range of respondents and to construct a story that reflected the range of ideas, emotions and themes that emerged.

3.7.2 Power and ethics

Skelton (2001, 90) discusses how to conduct cross-cultural or feminist research ‘well’. By this she refers to an understanding of the differences between the researcher and those participating in the research. I was aware of the power relations throughout the research process and in specific encounters (Dowling, 2005). I paid close attention to the spatial, political and cultural setting from which the knowledge emerged. In terms of utilising data, I attempted to be sensitive about generalising my findings. I was also cognisant of what my research findings allowed me to say about people, places and processes outside of my sample. I attempted to be cognisant of the power relations between the researcher and the interviewees (Hay, 2005). I was aware that they did not know how I would interpret their answers and I did not know to what extent they would be forthcoming with their answers. I strived to build a rapport between the respondents and myself as a researcher. I attempted to wear clothing that was similar to the women I interviewed and I attempted to put the interviewees at ease with my body language. Often times, informal dialogue occurred after I formally concluded the interview, shut off the audio recorder and the informant was more relaxed. If the informant felt comfortable with us, she/he would offer us tea after the interview was completed and we would stay for another half hour or more talking. At times, I found the digital audio recorder a barrier to the flow of conversation; most respondents had never been taped before.

I was conscious of the fact that my thesis would be based on what they decided to communicate to me and the story I would be creating through this thesis (Mansvelt and Bert, 2005) rather than identifying a particular truth arising from the data. Lavers (2007) argues that respondents are likely to say what the researcher wants to hear; I do not think this is the case because I have worked in many different countries and have learnt how to ask questions and to listen carefully (through

interpretation) in order to ask for clarification of comments when necessary. I focused on how the questions were posed and tried not to misinterpret comments from interviewees by asking P. additional questions after the interview was completed. The information gathered was triangulated with information from other people in the same geographic area and from other respondents as well as from a desk review of reports and statistics where feasible.

My fieldwork and the study were conducted in accordance with the ethical principles set out by the Graduate Committee of the Geography Department, Durham University. I strived to be aware of my reflexivity and the role I played as a researcher as well as the research process as noted by England (1994). Following England's suggestion (Ibid, 81), I attempted to utilise, "a more reflexive and flexible approach to fieldwork [that allowed me] to be more open to any challenges to [my] theoretical position that fieldwork almost inevitably raises". Nepalese culture is significantly different to mine and I was acutely aware of my differences to the respondents.

Mohanty criticises individuals from the world's minority who speak on behalf of the world's majority, I acknowledge this as a significant risk although attempts were made to enter the "space and vision of, and in solidarity with, communities in struggle in the Two-Thirds World" (2003, 507). I was aware of my status as a foreigner, as a woman who had much freedom of movement, my level of education, my access to healthcare and the relative ease in earning money compared to respondents in Bharatpur. My positionality was less contentious and did not pose a noticeable barrier when interviewing the IAC because I understood the technical language they were using and could easily relate to the issues they were attempting to address through their professional engagement. This was more positive than negative because I believe they were more forthright with their views than they may have been with another researcher who was not familiar with the sector. They trusted me to present their views without fear I would compromise their anonymity.

Conducting fieldwork in Bharatpur that is physically in the Terai but politically aligned with Kathmandu posed a difficult set of issues. The Terai is generally

considered a contentious stretch of land with indigenous communities who are not in agreement with Kathmandu (Gellner, 2007). Bharatpur is different to the rest of the Terai, people were moving to Bharatpur due to its perceived safety. My impressions of the Terai are not reflective of the reality for most of the Terai area. The findings I interpreted and represented need to be taken with caution due to the specificities of Bharatpur. The tensions of the Terai were not directly addressed in this research project. Residents and government officials spoke of safety and security as reasons to be in Bharatpur. I did not feel comfortable asking for detailed explanations from the migrants from the eastern Terai to explain what security issues they had faced, considering ethical considerations and - 'do not harm', (Kellehaer A, 2002) therefore I did not probe deeply. Considering my positionality and the power dynamics in the research process highlights the complexities, sensitivities, difficulties and dilemmas (as described by Skelton) associated with research conducted in different cultural settings.

All of this matters because my positionality impacts the type of research I was able to carry out and the type of information respondents were willing to share with me. The arguments I have made through this thesis are based on my history and the engagement I had with the social and physical environment and the respondents in Bharatpur, Kathmandu and elsewhere. Doors may have been closed off due to my gender, men may have felt more comfortable talking with another man. Access to information from women was opened due to my own identity as a woman and mother. Another researcher who met with the same respondents as I had ultimately would have written a different thesis based on the information presented. I could only see partially and much knowledge has not been included in this thesis.

3.8 Reflections

In this section, consideration is given to the evolution of a research project that spanned over three years, limitations encountered during fieldwork trips and lastly, reciprocity and learning from the research process.

3.8.1 Evolution of research project

My research focus changed over the course of my PhD. My interests and the funding source for the PhD steered the research to have practical application in a country in the global South, which had exposure to natural hazards. The initial aim was to address a gap in how resilience is understood in the urban context and to assess if resilience can be operationalised. I had hoped to create a set of disaster resilient community characteristics for the urban setting in Nepal. I framed my questioning in the following way: in the rapidly urbanised part of the city, ward 11, will there be heterogeneous perceptions of risk compared to ward 4 (this was subsequently rejected in the first fieldwork trip in Bharatpur). After the initial fieldwork trip to Bharatpur, I was less certain about the prescriptive focus on earthquakes and community resilience and instead I began to view governance mechanisms and urbanisation as particularly important based on the empirical findings that were emerging. I became interested in cities, how to link local government to people and the role of outside influences (international aid interventions on resilience and role of international knowledge due to migration).

Through May – September 2015, I struggled to accommodate the earthquake event into my research. The trauma of the earthquake experience had a dramatic impact on my understandings of personal resilience and what constitutes community resilience in a crisis event. The word community no longer proved useful to me, rather, the word collective more appropriately reflected what I heard, saw and felt during and in the days after the earthquake. This is due to the manner in which I experienced the actions of those around me during and in the immediate aftermath of the earthquake. This resulted in de-emphasising the concept of community in the research. I hesitantly explored the possibility of refocusing my research to be a pre and post disaster experience and to understand how the earthquake changed people's perceptions of risk (if at all) and how their resilience was forged.

In September, before I travelled to Bharatpur, I (finally) understood I needed to listen to respondents in the upcoming fieldwork trip and incorporate the earthquake in the manner appropriate based on what I heard from the respondents. It became

clearer after the last fieldtrip that a balance between everyday risks and events including the earthquake in two different socio-spatial settings of a rapidly urbanising city in a post conflict state from the perspective of residents would need to be considered. This would be supplemented by conversations with government officials and the IAC. This tension of how to frame the research was particularly problematic. Utilising the conceptual framing of 'the everyday' and 'the event' is not necessarily the most appropriate framing for a research project but it is the one that most closely identified with the messages that were emerging due to the iterative and comparative approach I chose to engage with. There are limitations to the conceptual framing of the everyday and events. For example, the everyday is very broad and most happenings can be encompassed in this lens. Much can be lost or overlooked. Also the conceptual lens of the 'event' allows the researcher to define which events are analysed and which are ignored. This can be perceived as a shortcoming of the approach. However, on balance, the conceptual framing of 'the everyday' and 'the event' is a very useful way to push the boundaries away from disasters discourse - thus unsettling the centrality of disasters and reengaging with a broader interpretation of risks.

During my PhD research period, I had three dilemmas: choosing fieldwork sites, the earthquake and lastly considering how to make my work 'useful'. The first predicament was choosing my fieldwork site, requiring two scoping trips (Nepal and India) and choosing Bharatpur after consultation and advice from NSET. The second was deciding how to incorporate the earthquake experience into my research, this required an additional fieldwork trip to understand how residents, the local government and other organisations perceived the earthquake and how important it was in their lives as well as understanding how risky the earthquake was to people. The last issue was balancing how to make the research project useful to non-academic partners while striving to produce an academically rigorous thesis. By facing these three issues I have learnt there is no clear path in research. There have been many dead ends where I researched a particular concept or reasoning only to decide it would not support the larger body of the thesis. A great deal of investigation and writing did not find itself in this thesis. I learnt there could be

several theses based on the fieldwork, I had to chose a focus and stay with it. This was particularly difficult.

3.8.2 Reciprocity and learning

Throughout this doctoral research, I have been committed to engaging in reciprocity “considering what you can give back to those who have given up their time and provided you with assistance” (Banks and Scheyvens 2014, 174). This section addresses how I have attempted to make the research project useful to non-academic partners. I have participated in dissemination meetings with my national level partners (NSET, DFID, NRRC Flagship 4 and their partner organisations) as well as the municipal officials and I produced written reports for NSET and for the municipality. I also presented my emerging findings to the Flagship 4 urban task force in October 2015. I met one official of the local government at the end of each trip and shared my impressions of emerging themes. I am engaging with Nepalese colleagues, INGOs, the British government, as well as other academics in order to share my emerging findings and to hear their reflections on my work. I have written articles for Durham University’s IHRR publications, blog posts for the Dept. of Geography postgraduate site before and after the earthquake (Appendix K). I co-authored a newspaper article in the Strait Times following the earthquake and I published a non-peer reviewed article in the American based Natural Hazards Observer. In relation to the INGOs, I participated in a two-day expert panel for Zurich Insurance / Practical Action’s consortium on operationalizing community resilience (June 2015) and continue to support them when requested. I also presented my emerging findings to DFID funded practitioners working on resilience at an event I co-organised with the Inter Agency Resilience Group titled, “Urban Resilience” in London (April 2016).

At Durham University, in December 2015, I co-organised the “Evolving narratives of an earthquake” event with Professor Ed Simpson from SOAS as the main speaker. Subsequently, I produced the seven minute video of Professor Simpson’s talk (<https://www.dur.ac.uk/ihrr/news/eventreports/evolving-narratives/ed-simpson-1/>) and the other videos and documentation related to the event (<https://www.dur.ac.uk/ihrr/news/eventreports/evolving-narratives/>). In May 2016, I

organised an interdisciplinary internal event at Durham University for the first anniversary of the Gorkha earthquake event titled “Reflecting on the past year”. I have presented my emerging findings at three large academic gatherings: the 2016 Royal Geographical Society postgraduate conference, the 2016 American Association of Geographers Conference and the 2016 Royal Geographical Society / Institute of British Geographers (RGS-IBG) conference. I also have presented several times at Durham University’s IHRR sponsored events and seminars.

In written form, I have authored an academic paper and book chapters. A sole authored academic paper titled ‘A continuum of perceived urban risk – from the Gorkha earthquake to economic insecurity’ will be published in 2018 in the *Environment and Urbanization* journal as well as a sole authored chapter titled ‘Reflecting on the 2015 Gorkha earthquake, tread carefully’ in the forthcoming (2018) Routledge Handbook for Social Work. I have co-authored a chapter in a human geography methods book on the ethics of investigation during and after a disaster (Oven et al, forthcoming). Lastly, I am co-editor of and contributor to four chapters in a book titled *Evolving Narratives of Hazard and Risk, The Gorkha Earthquake, Nepal, 2015* (Bracken et al, forthcoming; Rusczyk, forthcoming; Rusczyk and Robinson, forthcoming; Robinson et al, forthcoming; Dixit et al, forthcoming) to be published by Palgrave Pivot in 2018.

I have viewed the above-mentioned activities not only as a form of cooperation and reciprocation but also as a form of learning through which I can strengthen the quality of my research. Learning is a name “for the specific processes, practices and interactions through which knowledge is created, contested and transformed” (McFarlane 2011, 3). These interactions have served a valuable purpose in this research at times challenging my formulations and at other times strengthening them. For example, when I have shared my emerging research findings with different groups in the United Kingdom, the role of women and women’s groups have generally elicited more questions and comments from the audience than any other topic. This was particularly evident when women and gender were not the topic of the presentation. This has led to my own questioning of what I have heard and how I

am representing the information and also why some people have reacted positively or negatively. This crisis of production (Skelton) is one that I continue to reflect on.

3.9 Conclusion

Reflecting on the academic journey that began in October 2013 and is nearing completion through the drafting of the thesis, it has been a tumultuous journey. The research has changed, evolved and become more defined over time. Through collaboration, effort, engagement with theory, practice, presenting emerging findings to organisations involved in practice, by attempting to understand the needs of people, government officials, representatives of the IAC, a complicated multi scaled interpretation of relationships and coping mechanisms has emerged. Answers to practical questions have not been provided by this thesis, rather an exploration of themes and further questions to ask, reflecting on issues of power, scales and whose risk perceptions matter most has emerged.

The methodology chosen has implications for how the research evolved. By choosing a qualitative, mixed method, intra-urban comparison in a medium sized city with semi-structured interviews, focus group discussions and photographs, the research evolved in a particular way. This research considered the views of residents, government officials on a local and central level and the additional viewpoint of the IAC and practitioners. Through engagement on multi scales, a nuanced understanding of risk perceptions, risk and resilience has emerged. Intra-urban comparison has been particularly useful in this context of multiple fieldwork trips where change was very visible in the city.

The following four chapters represent the empirical work that arose from the methodology utilised. By starting from the lived experience of residents and building knowledge based on their lives and those who influence the urban a story emerges. This thesis is based on an intra-urban comparison of risk perceptions of residents. Residents who are attempting to show their resilience or reworking of a city. Some residents perceive risk through two events that occur while others are concerned with how to influence the emerging urban context post events. Meanwhile, the IAC introduced the concept of (disaster community) resilience and is

spearheading the focus on natural hazards, especially earthquakes. All this together influences the city and its residents in different ways.

Chapter 4 Learning about risk perceptions in the city

4.1 Learning about the city through its residents

Bharatpur is an ordinary medium sized city of the world (Robinson, 2006) with no particular claim to fame. It is a young municipality emerging from a small market town. Increasingly, Bharatpur is a dynamic and heterogeneous city with a long-established population at its core, affluent Brahmin and Chettri caste newcomers building houses, people fleeing conflict in their villages and towns in the Terai, new residents from nearby villages being amalgamated into the sub metropolitan city as well as economic migrants from the neighbouring Indian state of Bihar, India. The majority of the world's population (United Nations et al, 2014) live in cities of the global South such as Bharatpur, where everyday life is already difficult for its residents: daily twelve hour electrical power outages, pollution from a motorway bisecting the city, lack of solid waste management, inaccessible public transport for populations living further from the city centre and the absence of elected municipal officials. Bharatpur's inhabitants, the way they live in the everyday and what they consider to be hazards and risks, provides an opportunity to learn (McFarlane, 2011) from this 21st century city.

Chambers (2006) stresses the necessity to engage with people, to listen to their needs and priorities for their lives and for their families. He suggests it is essential for "decentralized analysis, encouraging, permitting, and acting on local concepts and priorities, as defined" (Ibid, 33) by people. In this chapter, Bharatpur, as an example of the majority of the world's cities, is interpreted through the lens of its residents utilising an intra-urban comparison from two parts of the city (wards 4 and 11). The hazards and risks the city creates or showcases are investigated. Utilising a social constructivist approach to risk perception, the first research question is answered in this chapter, "What are the risk perceptions of residents in the city?". Risk perceptions involve "people's beliefs, attitudes, judgements and feelings, as well as the wider social or cultural values and dispositions that people adopt" (Pidgeon et al 1992, 89). Through this social constructivist approach, the perceiver of risk is "rarely an isolated individual, but a 'social being' who necessarily lives and works, plays and rests, within networks of informal and formal relationships with others"

(Ibid, 111). All of which influence the person's view of risks. Lupton (1999, 17) differentiates between hazards and risks in the sense that while the hazards "are 'natural' and neutral, risks are the value-laden judgements of human beings concerning these natural events or possibilities". Both are addressed in this chapter.

This chapter argues that the risk perceptions of most residents in Bharatpur are focused on everyday worries that impact the respondents, their families and their neighbourhoods. These are issues such as employment, health, education and physical infrastructure. Respondents from wards 4 and 11 focus on what they can control and influence primarily in the short term. While natural hazards are necessary to understand due to the potential for havoc they can wreck on the lives of urban dwellers, fires, earthquakes and floods compete with infrastructural worries such as the quality of roads for respondents' attention. Utilising an intra-urban comparison, an understanding of risk perceptions from the point of view of residents in two very different wards leads to a fuller understanding of the range of risks perceived in the urban. In addition to the key respondents in the two wards of comparison, the views of the municipality and municipal leaders is considered in the discussion of urban risks. This chapter contributes to the literature on cities, risk and hazards by providing a nuanced understanding of risk perceptions, hazards and the interplay between the city, residents and the environment.

4.2 Description of selected respondents

A cross section of residents in Bharatpur became this research project's key respondents from the two wards of comparison, wards 4 and 11 (Appendix D). These individuals, with their lives, livelihoods and social networks are the global South's urban majority and often they are missing in discussions related to cities (Simone, 2014). This urban majority's perceptions of risks in the form of worries, their experience of the city and its natural hazards, is based on the intersectionality of factors such as location in the city, being a home owner or a tenant, sources and levels of income, global connection with extended family or their own time in a foreign country, caste and ethnicity, length of time in the city, occupation, gender, age and education. This section profiles eight urban dwellers initially through their location in the city, four from each ward. These eight individuals have been chosen

to showcase a range of characteristics, livelihood strategies and ways of living in the city (Simone and Fauzan, 2012). By initiating analysis of the empirical work from the context of place, where people reside and create their lives, we can notice a differentiated interpretation of the city (McFarlane et al, 2016). Location in the city has a significant influence on how some respondents perceive their life, hazards, everyday worries and lastly, how they cope and influence the city to their benefit. For others, those more affluent, location does not have as much influence on perceptions of everyday risk. They have the financial and social stability and resources to consider planning for the future thus addressing other worries.

In this discussion about culture and risk perception, the caste system in Nepal needs to be considered. According to Rankin (2004, 130), “caste was outlawed in Nepal in the 1955 Civil Liberties Act (which prohibited discrimination on the basis of *varna* [social class], race, caste, tribe or ethnic group), [even so] the state has tacitly permitted caste to persist as an important customary marker of social identity”. The structure of class relations in Nepal and the social discrimination on the basis of caste, ethnic and gender differences plays a significant role in perpetuating social inequality in Nepal. The caste system has also led to a stifling of the economy because it has imposed a division of labour that is enforced (Shakya, 2009). Socio-cultural values in Nepalese society reflect a strong hierarchical tradition, caste orientation, differentiated rank and status, unequal distribution of privileges and amenities based on family and social backgrounds (Jamil and Dangal, 2009). Gellner (2007, 1823) suggests that historically, the “dominant groups who spread through the country as landowners, priests, administrators, soldiers and policemen, were the *bahun* (Brahman) and Chettri (*Kshatriya*) castes... For the non-tribal (caste-organised) people who have lived in the Terai for generations, and are called madhesis, there are cultural, kin, educational, and political links with Uttar Pradesh and Bihar”, India. In Bharatpur, the indigenous population (Kumals) and Muslims are the most vulnerable due to their lack of connections to centres of power in the city. The ethnic groups in ward 11 are more vulnerable due to their lack of income opportunities, while the Newari community in ward 4 is more affluent and oriented to business opportunities in the city. The Brahmins and Chettris are considered high

caste groups and they maintain social power over the other groups. If they are also affluent, they have access to and exert political power.

4.2.1 Ward 4 respondents

Ward 4, bordering the river on the west, is in the oldest part of the city - the commercial, retail and financial hub as well as the transportation intersection between two national highways. Ward 4 is a “dense and diverse [part of the city] that sustains many different trajectories of urban life”, similar to McFarlane and Silver’s findings in Kampala, Uganda (2017, 3). In Bharatpur, this is where the informal settlers, tenants, shopkeepers, aspiring middle class homeowners and transient Indians are creating their urban lives. The following four key respondent profiles (Figure 4.1) represent the complexity and heterogeneity of the urban physical and social environment as well as the relationships between inhabitants in ward 4 and between the inhabitants and the local authorities.



Figure 4.1: Ward 4 respondents: Hari Prasad, Nani Maya, Rita Devi and Alam

Hari Prasad

Hari Prasad is an affluent Brahmin recycling business owner. He is 52 years old, married and has three adult daughters, one of whom is studying medicine in the USA. Hari Prasad lived and worked for a decade in London. His main worry for the everyday is his health; without his health he explained, he could not run his businesses. In addition to owning a recycling business that employs 12 young men (primarily Indian nationals), he also owns a nearby commercial building where he rents out retail space. In his view, many of the people in ward 4 are newcomers and

tenants. In reference to his business, he explained that it was easier to hire Indian nationals:

“They [the Indian population in ward 4] will do anything and everything to earn money. They even work as toilet cleaners. This is in direct contrast to the Nepalese men who will not work, which prefer to be unemployed or to go abroad for little income. Nepalese men would not stoop to working in recycling. They prefer to go abroad, spend 100,000 NPR⁶ to get there and then earn 10,000 NPR per month while the Indians in Bharatpur send remittances to India from their [earnings of] 20,000 NPR per month”.

Hari Prasad stresses the paradox where Indians will work in his business and earn enough to send remittances to India, while Nepalese men find this type of employment and income unsatisfactory and demeaning. In his view, for the same wages available in Bharatpur, young Nepalese men will travel abroad, far from their families and experience hardship. He believes this is socially more acceptable than to be seen by extended family and friends working in a ‘demeaning’ sector locally. This is also a common interpretation amongst municipal officials interviewed as to the rationale for high level of international male migration although this is not supported by interviews with international migrants in Bharatpur (from ward 11).

Nani Maya

Nani Maya is a housewife on New Road. She is Newari, married and has four children. Two of her daughters are studying to become nurses, one is studying to become a dentist and the son is in secondary school. She has lived in Bharatpur for 20 years, having moved from a nearby village. Nani Maya has witnessed many changes in ward 4, in particular significant deforestation in the past ten years due to private house construction. Nani Maya and her husband built their home ten years ago and they earn income from renting rooms in their three-storied house. Their tenants include businessmen who are managing economic activities in Bharatpur as well as renting rooms to women and their children who have moved to Bharatpur for private education funded through international remittances. Her primary worry is ensuring her four children receive a good quality education and have opportunities for the future. She stressed that although tertiary education is very expensive, it is worth the investment. Her brother, whom she solicits advice from, is a physician in

⁶ Approximately \$1,000 in April 2015

the USA and he suggested education as an investment for a good future. Nani Maya is in a secure financial position to consider the future.

Rita Devi

Rita Devi is a widow, in her early fifties, of the Chettri caste, has been educated to secondary level and has lived in Bharatpur all her life. She worked abroad as a low-skilled labourer in order to be able to pay for a private education for her three children after the untimely death of her husband. This key respondent is relatively affluent, even though generally female-headed households have the reputation for being the poorest of households. This false notion of being the poorest households is not academically substantiated by data according to Chant (2007). Her three adult children (one son and two daughters) have also been international migrants. Her son is in Oman (from which remittances are not high) and one of her daughters is working and studying in the USA. In terms of everyday worries, her poor health is the main cause of worry. Rita Devi has a steady source of income from poultry rearing and a cow. For expenses related to her health, her daughter in the USA provides financial support. Rita Devi explains the necessity of owning a home. In Bharatpur, owning a house gives a person visibility; otherwise, a person is not considered 'relevant' (not worth socially supporting) in the community and to the local authority. For Rita Devi, the combination of being the head of household, and having raised three children, one of whom is living permanently in the USA, as well as building her own house gives her prestige and respect in the community. This was visible during two fieldwork trips when her neighbours and the women's group focus group participants were very respectful towards her.

Alam

Alam is a Muslim bicycle shop owner, in his late 30s, has six members in his household, one of whom is a young adult son who helps in the shop. Alam has a primary education and has lived in Bharatpur all of his life although he explains that he "came from Birgunj" (three hours east on the Terai). The bicycle shop owner is pleased with the changes in Bharatpur in the last few years: the paved roads have been widened, houses are being built and there are now more vehicles. Two years ago he established his bicycle repair business on one of the central road arteries of

ward 4. Alam stresses his livelihood is secure (repairing bicycles), therefore his biggest everyday worry is the need to rent a house and business premises. He does not have any family relations who work abroad and does not receive any international remittances. In comparison to other respondents, Alam's situation appears more uncertain than others due to the fact he needs to rent both his home and work space and has no remittances.

The four profiled respondents from ward 4 are: two men and two women, of different castes, ethnic groups and religions (Brahmin, Chettri, Newari and Muslim). They represent a range of low and high levels of income and different levels of education. The four profiled respondents from ward 4 worry about a diverse range of issues including finding a place to rent and live, their own health and also education for their children. They highlight a range of themes that will be developed in this chapter including: economic insecurity, health as a critical aspect of economic security and livelihood creation, the relationship between house ownership and links to social security and inclusion in social networks in the city and lastly the perception that education is the key success factor for a better future.

4.2.2 Ward 11 respondents

Ward 11, bordering the forest on the northern edge of Bharatpur, historically was agricultural land inhabited by the indigenous Kumal population. Thirty years ago, ethnic groups arrived and settled in the centre of ward 11. Twenty years ago, Brahmins from the hills of Nepal were encouraged by the central government to settle in the Terai; some settled on the outskirts of ward 11 near the forest. Over time, these residents have received deeds for the land where they had built their homes decades earlier. They do not own agricultural land and are marginalised due to scarce opportunities for employment, poor road networks and poor access to water. Utilising McFarlane and Silver's phrase (2017, 3) there are "patchwork combinations of formal and informal infrastructures" especially in the road network. Roads are paved for short lengths and then are dirt dusty tracks and then once again are paved roads for small stretches.

The affluent newcomers who are also Brahmins and Chettris settle on the southern border of the ward, near the city centre where key facilities (including hospitals, schools and government offices) are located. They do not engage with the indigenous Kumals who have been in ward 11 for decades. The difference between the affluent well-educated Brahmin newcomers and the other residents of ward 11 is illustrated below. Four of the key respondents are described below (Figure 4.2).



Figure 4.2: Ward 11 respondents: Shankar, Laxmi and Prem, Narayan

Shankar

Shankar is from the Kumal indigenous population of Bharatpur, he is an unskilled, international migrant worker in his thirties. Shankar was born in Bharatpur, has a primary education and speaks some English. He is married and has one young son. His meagre income is from agriculture as a day labourer. Due to difficulties earning enough money to sustain his family, he has been working and saving money in Malaysia. The recent untimely death of his father forced his unexpected return to Bharatpur. He plans to travel abroad for employment again if he can obtain an employment visa from the Nepalese government. Shankar stresses the importance of employment and income generation as a constant everyday worry for him.

Shankar does not want to discuss hazards such as floods, earthquakes or fires even though the interview took place after the earthquake. In his opinion the earthquake is not the most important source of worry and concern for him and his family. Instead he steers the discussion of risk perception to focus on his indigenous community, which is generally financially poor and dependent on subsistence agriculture. In his view, many of the original inhabitants, due to lack of education and political influence, were taken advantage of by some ethnic groups. The Kumals

sold their land to newcomers at very low rates over a period of decades and became poorer and more marginalised in the process.

The Kumal indigenous people have not been able to benefit significantly from urbanisation and changes that have occurred during the past decades in Bharatpur. In Shankar's opinion, this is due to their lack of understanding of how to access government services and how to interact with other groups in the ward. Most recently, the members of the ethnic groups and the Kumals have begun to work together effectively for the improvement of their "village" in the middle of ward 11. This is in the form of a neighbourhood group called a tole level organisation. Together, the Kumals and the ethnic groups are trying to understand how to access government services and to lobby for infrastructure in the form of paved roads to their 'forgotten' part of ward 11 (this will be discussed in further detail in the next chapter).

Prem and Laxmi

Prem is a hospital security guard living on Jungle Road of ward 11 (the dirt track bordering the forest). He is Brahmin and married to Laxmi. Prem moved to Bharatpur twenty years ago, he is retired from the army and he owns his very small parcel of land near the jungle (most probably he received ownership of the land from the government as opposed to purchasing it). He currently works as a security guard in a private hospital in Bharatpur. Prem and Laxmi have three sons, one is married, and they have one grandson. There are seven members in their household, although only four live in the house (including daughter in law and grandson). All three of their sons are abroad, one has been in Dubai for two years, one son has been in Malaysia for four years and the third son has been working in Kyrgyzstan for the past year. They went abroad to earn money; there are no employment opportunities in Bharatpur even with a higher secondary education according to Prem and Laxmi. This is a different view about international migration compared to Hari Prasad from ward 4. Prem explains that employment is the biggest everyday worry for his family and his neighbourhood. His neighbourhood bordering the forest is poor; some of his neighbours are from ethnic groups who can only get employment as day wage labourers. They do not have the financial resources to access international migration

opportunities. The main strategy for income generation in his view is to travel abroad; the alternative is to be very poor. The other everyday worry is the quality of the roads; they are dirt tracks and need to be tarmacked.

Laxmi's physical mobility is restricted to the outskirts of the city, a small area near the forest where she lives. There is a neighbourhood group (tole level organisation) and a women's group in their neighbourhood, both of which have been established with the support of an INGO. Laxmi explains that this women's group is her main source of information and learning; she does not receive much new knowledge from her husband. Laxmi is grateful to learn about topics such as women's health and environmental cleanliness from women's group meetings. Rocheleau et al (1996, 18) highlight women's evolving visions of their rights, roles, and responsibilities and they are aided by participation in groups and organisations and this is what I also noticed in my interactions with women's groups.

Narayan

Narayan is a Brahmin shopkeeper in ward 11. He is part of the recent migration wave of affluent high caste Brahmin and Chhetri newcomers. Narayan is in his thirties, married with two young sons. He arrived from western Chitwan six years ago in the hopes of accessing Bharatpur's "good facilities" (private hospitals, paved roads, schools) and providing a good quality education for his children. His primary everyday worry is being able to finance educational opportunities for his sons. Narayan believes that without a proper education, there is less opportunity to have a good life. The shopkeeper is very proud of living in Bharatpur and is very positive regarding Bharatpur's good quality 'facilities' (private schools, paved roads, private hospitals). He built a house near the main by-pass road bordering wards 10 and 11 and has a shop on the ground floor of the house. In his opinion, newcomers integrate well and participate in the tole level organisations thus accessing social networks in the city.

The four profiled respondents from ward 11 are: three men and one woman, three are of the Brahmin high caste and one is from the indigenous Kumal group. Three worry about income and economic security, and only the Brahmin newcomer is secure in his income and place in the city thus allowing him to consider the future and educating his children as his main worry (even after the earthquake). Those who

worry about economic security are not satisfied with the situation in the city; do not feel their geographic area of ward 11 represents a city in terms of infrastructure and access to facilities. The only profiled key informant in ward 11 who is satisfied with the city and is planning for the future is Narayan, the more affluent newcomer.

These four respondents also highlight themes that will be developed in this chapter including: economic insecurity and the necessity to work abroad and send remittances to Bharatpur. These remitting households in ward 11 do not appear to be as affluent as remitting households in ward 4. Education of children was also considered as the primary worry if economic security was accounted for in both wards. Informants in both wards raised the discussion about infrastructure in the city and the relationship between residents, community groups and local government. The eight profiled respondents from wards 4 and 11 present useful insights into some of the residents of the two wards but this is not a representative sample of all the people in the two wards nor for this medium sized city. Some issues or themes may be missing. This limitation of the research is being acknowledged and any claims about the city need to be considered in light of this.

4.3 Seeing everyday risk for the family

The everyday has as its starting point, ordinary people, their everyday actions and commonplace events. “In addition to the everyday being concerned with normal living rather than abnormal events” (Rigg 2007, 16), the focus on the everyday promotes the necessity to consider ordinary people who live and conduct their lives in the best way they can. The range of profiles on some of the key informants above provides a glimpse into the lives of the world’s urban majority. Through an understanding of their lives and perception of everyday risk and worries, the urban majority’s everyday actions and maneuvering are made visible (Simone, 2014) and warrant reflection when considering what constitutes an urban risk and a hazard. Furthermore, by acknowledging what constitutes an urban risk or hazard, understanding can be furthered and possible action undertaken not only by individuals, groups but also by government and other stakeholders to mitigate urban risks (Mitlin and Satterthwaite, 2013; Pelling, 2012). Perception of risk is socially constructed and influenced by the respondents’ social and geographic surroundings

(Kruger et al, 2015; Dombrowsky, 1998; Pidgeon et al, 1992; Douglas and Wildavsky, 1982).

4.3.1 Perception of everyday risk in wards 4 and 11

In the two primary sites of comparison, wards 4 and 11, 18 respondents were asked the question, “What do you worry about on a day-to-day basis?”. There were a range of answers including: employment and economic security, their own health, education for children, family and needing to own a house and lastly, local community. Of the respondents’ characteristics, there are important factors and their intersections to understand how respondents perceive everyday risks and priorities. The following factors emerged as particularly relevant: location in the city, economic security (locally generated income and international remittances), owning a home or being a tenant, and lastly caste / ethnic identity in relation to length of time in the city. Other characteristics such as gender, level of education and age have also been considered to understand the cross section of respondents and their perception of risk.

There are significant differences in the perception of everyday risk and worries between respondents in ward 4 and 11 as well as differences in risk perception based on temporality due to economic and social security in the city. Nightingale’s research is centered in rural Nepal where until recently, most of the Nepalese population lived and she proposes (2011, 155), “Nepal is a particularly interesting case because the materiality of space is central to the circumscription of difference.” In this urban focused research, the urban context presents increased diversity of people based on location, income and caste and the influence of these factors on the everyday life of respondents. Ward 4 respondents interviewed as part of this study were found to be heterogeneous in their responses to everyday worries and also in the wide range of issues they generally highlight as risks, while ward 11 residents interviewed were more homogenous in everyday worries (Table 4.1 below) as well as in perception of hazards (to be discussed later in this chapter).

Everyday risk perceptions for respondents and their families

Ward 4 (10 respondents)	Employment	Health	Education	Family / House	Community
Hari Prasad		X			
Rita Devi		X			
Birgunj shopkeeper		X			
Hotel owner from the EU		X			
Nani Maya			X		
Dilu			X		
Female Shopkeeper	X				
Alam				X	
Young car washer				X	
Ram Prasad					X
Subtotal	1	4	2	2	1

Ward 11 (8 respondents)	Employment	Health	Education	Family / House	Community
Prem	X				
Laxmi	X				
Shankar	X				
Ward 11 Kumal migrant worker's wife	X				
Ward 11 Housewife on Jungle Road	X				
Ward 11 Female university student	X				
Narayan			X		
Ward 10/11 retired army officer			X		
Subtotal	6	0	2	0	0

	Employment	Health	Education	Family / House	Community
Total response for everyday worry / risk	7	4	4	2	1

Respondents in **bold** = profiled earlier in this chapter or in chapter five

Table 4.1: Everyday risk perceptions for respondents and their families

4.3.2 Economic insecurity is the key risk perceived

Income generation is evident in various forms amongst the respondents in the two wards. This includes day wage labour in the local economy (more obvious in the mixed usage ward 4), income from agriculture (more visible in ward 11), dairy and poultry products produced around the family home as well as international remittances (large and small amounts) from both immediate and extended family networks. Economic / livelihood security is essential to establish a foothold in the city. The significance of economic security cannot be overstated because it is mentioned unprompted by all respondents in every interview and is a significant worry in their lives. Without economic security, respondents are not able or are not willing to focus on other aspects of their lives in the city. In ward 4, many respondents earn at least a portion of their income from the local economy thus giving residents some economic stability and a direct relationship to Bharatpur through their everyday income. In ward 4, the retail shops are dominated by the traditional Newari ethnic group or by Indian nationals who own some of the businesses. The steady income generated is relevant to those respondents who mention their own health as their primary worry (such as the three high earning businessmen respondents in ward 4). Those who have low levels of income and rent work premises and flats for their families worry about their lack of property ownership (such as Alam) or worry about their family in general.

Most respondents in ward 11, including Shankar, are struggling today for employment and economic security. For ward 11 residents, employment and securing income for everyday living is the most important worry. They explain that

income, as a day labourer in agriculture is insufficient. The respondents stress their desire for more stable income and livelihood opportunities to be based in Bharatpur; rather than needing to work internationally to generate income. Bharatpur is preferred to international migration. In ward 11, some people are being forced due to economic necessity to sell fertile agricultural land on which they were historically dependent for food. This change from agricultural subsistence and some income generation to the sale of arable land may introduce a new set of issues in the long term related to economic and food security in urbanising Bharatpur. The price of land has increased exponentially since 2007 due to migration into Bharatpur during the Maoist insurgency and after the end of the conflict. At the present time, there is not a diversified economic base in the city (it is primarily retail sector, poultry and private hospitals) leading to a local economy largely financed by the sale of non-movable assets (land) and incoming international remittances.

There has been an exodus of young men from Bharatpur to international destinations. The livelihoods footprint (Rigg, 2005) of most of the respondents in Bharatpur “stretches far beyond the immediate locale” (Ibid, 172) and reaches into the international realm. Remittances are viewed as a source of pride amongst well-educated respondents as well as for those households who are more uneducated and poorer. Levels of remittances vary and can take different forms: direct remittances from male members of the nuclear family abroad in the Middle East (lower levels of remittance) or higher levels of remittances based on higher level of migrant’s skills and education and who are employed in South Korea or Malaysia. There are also respondents who receive remittances for extraordinary expenses (such as education or medical expenses) from family permanently residing in the UK or the USA.

Reliance on remittances accounts for a significant source of household income in Bharatpur as well as in Nepal (Practical Action and Nepal Risk Reduction Consortium, 2014) and is probably “disguising rather than addressing the root causes of poverty and vulnerability” according to Rigg and Oven (2015, 180). There is a difference in remittance utilisation between respondents in the two wards. The two wards have the same number of households with family members abroad but the profiles vary. Ward 11 respondents and their remittance receiving households

(Shankar as well as Prem and Laxmi, whose three adult sons are abroad) or who themselves have travelled for employment, are struggling economically. Some of these individuals have given up hope of working in the local economy and instead have been forced by economic reality to diversify their economic sources by traveling abroad to work. These remittances allow them to survive but not to thrive and consider investing in the future.

Brahmins / Chettri and the Newars working abroad are both in the top three out of eight remitting ethnic groups according to the World Bank (2011, 44). This would explain why Chitwan district has extremely high levels of remittances compared to the rest of the country. There is also a large number of highly educated youth from Bharatpur who emigrate for educational opportunities in Australia and Japan. They do not return to Nepal but send money thus allowing their parents to be ‘community mobilisers’ as in the case of the Citizens Village Tole President living in ward 4 (to be discussed in Chapter Five). The profiled respondents in this chapter who live in ward 4 (Rita Devi, Nani Maya and Hari Prasad) and who receive remittances or have family abroad are more affluent households. Their remittances allow for investment into the future in the form of education for children (primary, secondary and tertiary), community activism or building houses. The remittances also allow them freedom to engage on a local level in community development activities (to be discussed in the next chapter). The Asian Development Bank Report 2014 (ADB et al 2014, vii) hypothesises that remittances fuel the service sector and they allow for some of the disposable income in Nepal. This can be seen in Bharatpur. Remittances fuel many parts of the economy. A head teacher of a private boarding school explains that in some parts of Bharatpur, “75% of all households have someone abroad and in good countries such as Australia or Japan”. The private school head teacher continues, “economic resilience is due to remittances, people live here happily. They [high remittance receiving households] donate funds for social projects, they are more involved in the community”. It appears economic resilience leads to social support systems in the city.

The three affluent and successful businessmen respondents interviewed (including Hari Prasad, the hotel owner and the shopkeeper from Birgunj) live in ward 4 and

express concern over the link between managing their businesses and their health. Without their health, they fear their businesses will flounder. Both Rigg (2012) and Krishna (2011) draw the connection between the number of people in the world who do not have universal health coverage and thus are only “one illness away from poverty” (Ibid, 75). Rigg (Ibid, 122) suggests, “ill health is the asset risk par excellence”. The successful businessmen appear to be fully cognisant of this fact, describing their health as the biggest everyday worry. If they cannot work, their families can become vulnerable to not only loss of income but to the cost of paying for private healthcare. Two of the affluent businessmen who mention health as their primary everyday worry are also new in the city and are tenants. The combination of establishing businesses for long term stability based in Bharatpur’s economy and renting a home in the short term make the businessmen aware of how dependent they are on their own health for long term success in the city. They have economic success but not full membership into the city yet. For the poor and uneducated, health does not determine economic security in Bharatpur. In this research, the poorest respondents do not mention health as their worry. They struggle with income and employment security even with good health.

A tension exists between economic security based in Bharatpur and the difficulty to earn a living based in the local economy. Residents’ location in the city matters for their economic security, ward 4 respondents appear to be more rooted in Bharatpur’ economy but those who receive remittances are also more affluent. Half of the respondents have an international linkage through which remittances are received. In some situations, the remittances are regular while in others the remittances are received on an exceptional basis. Livelihoods are the first and main worry the respondents discuss. Without income they are unable to have the economic security needed to survive in the city.

4.3.3 Hope for the future through education

Douglas and Wildavsky (1982, 86) state, “How people perceive the temporal aspects of risk depends on the span of their attention”. Until these every day needs through income security and good health have been met, residents have short span time preference behaviour (Wood, 2004). Once their needs have been taken care of,

respondents can focus on other worries that are based in the future. Respondents, such as Nani Maya in ward 4 and Narayan in ward 11 with economic security and the ownership of houses, prioritise the future in their perception of risk. These respondents have the opportunity to consider and plan for the future. In their view, ensuring their children receive a good quality private education (most often in English) offers hope for the future in terms of employment opportunities and mitigation of risk. This emphasis on the relationship between the future and education is irrespective of location in the city and is also irrespective of respondents' caste or ethnic group. "Many people in Nepal see education as the best path for improving their life chances" or those of their children (Nightingale 2015, 200). People hope their children will be able to migrate abroad (for high paying jobs utilising the English language) or through education to have "access to larger-scale networks that can bring them long-term access" to development, financial and political resources (Ibid). The relationship between economic security, hope for the future via education and international migration will continue in the future unless Nepal's economic situation improves.

4.3.4 Home ownership

In addition to location in the city, house ownership also has a significant influence in how respondents perceive risk. All respondents in ward 11 owned their homes. Ward 4 had homeowners and tenants. House ownership is a worry for some respondents in ward 4. The key respondent tenants, all of whom live in ward 4, have a different range of worries than the house owners. The two successful businessmen who rent their homes worry about their health. In ward 4, tenants are often also less affluent. Both the poor uneducated car washer and Alam, who rents his business premises and his home, worry about their families and not owning a house. Most tenants are more precarious in the city compared to homeowners because they do not have a direct connection to the city via a permanent residence. Their lack of house ownership makes them invisible to their neighbours, to the ward and to the municipality. "Without the social options to manage that risk, they have to rely more heavily upon their immediate family and less upon transactions with less intimate others" (Wood 2003, 457). In order for people to have social security in the city, they need to own a house.

Home ownership signifies permanence, a long-term commitment to Bharatpur, creating social visibility for respondents in relation to each other in their neighbourhoods. House ownership leads to the creation of essential social connections in the rapidly urbanising city that allow other worries to be addressed. House ownership is the first step in order to “be seen” according to Rita Devi (in ward 4), to be recognised by others in the community and by the local authority that can supply physical infrastructure to the local community. Home ownership is the cornerstone to the city upon which social connections and power in the city is based. ‘Tenants’ is a broad term, according to Nani Maya in ward 4 who has tenants in her home:

“Different types of people stay in rent [are tenants]. Some are working in organisations such as banks; some are managing hotels, restaurants. There are also some ladies whose husbands are abroad and they are staying here for the child’s education”.

House ownership is significant for coping mechanisms related to risk perceptions in the everyday because economic security does not (as of yet) provide the foundation for socially and politically influencing the urban (without caste influence). Those who do not own their own home in Bharatpur are particularly vulnerable because they have narrower support systems within the city even if they have economic security. Home ownership is the next step in gaining access to what is socially needed in the city - links with others. Moser (1998) found house ownership to be an essential urban productive asset allowing links to be made in the city. Sou (2014) also found house ownership to be a strategy to decrease risk of damage from regularly occurring hazards such as mudslides. In this research, home ownership is critical in order to be able to create or be allowed into the urban forms of locally based community that are emerging in both wards. These forms of social networks and mutual support also create somewhat tenuous but vital links to the local authority and will be explored in the next chapter.

4.4 Perceiving urban risks on other scales

I argue key respondents in wards 4 and 11 perceive a range of everyday risks. For most respondents, everyday life is difficult, forcing many residents to focus on their livelihood strategies often including international migration. Pidgeon et al (1992, 102) argue “cognitive representations that individuals construct of risks to which they themselves are personally exposed, and those imposed upon society as a whole” warrant consideration. They suggest there is a difference in understanding between ‘personal safety’ and ‘threat to society’. Pidgeon et al’s (Ibid) clarification helps to make this research’s distinction between the worries related to personal safety respondents express about their own lives and risks and threats to society that are broader and imposed on a wider geographic area or society as a whole in Bharatpur. The latter are discussed in this section.

In Bharatpur, natural hazards (Wisner et al, 2012b) such as hydro-meteorological (floods), geophysical (earthquakes) and ecological (wildfires) are an infrequent part of the urban fabric and are not often part of urban residents’ lives. For Bharatpur’s residents, the focus on natural hazards is often not as important as the everyday challenging urban physical infrastructure and environment. Perception of natural hazards and the everyday urban infrastructure are discussed below as a form of everyday worries that are in Pidgeon et al words a ‘threat to society’.

4.4.1 Perceiving cities as landscapes of risk

Respondents in both wards highlight lack of physical infrastructure as a significant everyday worry. They discuss physical infrastructure in the form of poor quality of roads, lack of solid waste management and environmental degradation of a tributary and river, rapid urbanisation and air pollution. They do not mention access to water nor do they mention the daily (up to twelve-hour) electrical power outages that often result in darkness throughout the city. According to respondents in ward 4, the most common natural hazard is flooding from bordering Narayani River. There was a flood in the past twenty years that damaged some homes. Nani Maya believes deforestation near the riverbanks has the potential to lead to possible flooding in the future. Rita Devi does not think Bharatpur has any natural hazards but there are occasional electrical fires due to the poorly maintained electrical wires in the streets.

Respondents from ward 4 who have travelled abroad also mention air pollution in Bharatpur as a concern. For example, Hari Prasad considers environmental degradation in the city as a key emerging risk that has arisen in the past decade due to rampant construction, rapid migration into the city and lack of effective local government response:

“The government has declared [Bharatpur] as a Sub Metropolitan City but when you walk around the streets, you need to close your nose and walk. Preservation of environment is very important”.

When the businessman returned from working in the UK, he did not recognise his ward due to rapid urbanisation, influx of migrants and rapid construction of housing. Other respondents in ward 4 stress the pollution in the tributary and river caused by a lack of solid waste management for the city. Women who participated in focus group discussions in ward 4 (as part of a neighbourhood group and in women’s groups) viewed the degradation of the tributary and the river as a significant worry.

In ward 11, the most frequently mentioned societal risk and natural hazard include fire (electrical and forest) but other infrequent occurrences are mentioned more frequently - wild animal (tiger and rhinoceros) attacks from the forest bordering the ward. The majority of respondents (both women and men) referred to the patchy network of poor quality dirt and paved roads in ward 11 with associated issues of dust in the summer and muddy inaccessible roads during monsoon. Based on their research in rural Nepal, Rigg and Owen (2015, 181) argue that roads “can be life-changing and are often income-raising. Moreover, good roads are the one investment that local people, poor and rich alike, clamour for”. This is also relevant for the urban context of Bharatpur. Only the newcomers, those who live on paved roads nearer the city centre do not complain about the road infrastructure. The situation in Bharatpur reflects Pidgeon et al’s view (1992, 112), “in the context of risk perception therefore, the hazards that are likely to be of particular concern are those that pose threats to locally valued social and institutional arrangements or to other elements that are central to a particular way of life”. In wards 4 and 11, key respondents rank natural hazards lower than other everyday and infrequent worries that impact not just themselves but their neighborhoods and wards – wild animals,

fires and the urban physical infrastructure (roads, air pollution, degradation of tributary and river in ward 4 and roads in ward 11).

4.4.2 Local stakeholders perceptions of urban risk

Dodman et al (2013) propose that the scale and nature of urban risk depends on how risk is conceived in the city. They suggest the spectrum of risk includes: large scale disasters, small disasters and everyday risks. Interviews with local stakeholders such as the municipality, nurses and the Red Cross yield different responses compared to the respondents in wards 4 and 11. Government officials, at both the local and district levels, list the following hazards and risks affecting Bharatpur: flood, fire, road accidents, wild animal attacks and lastly, earthquakes. In addition to mentioning floods, fires and earthquakes as natural hazards for Bharatpur, a representative of the Nepal Red Cross District office identifies urbanisation as a rapidly evolving urban risk. He also explains the relationship between everyday urban life for the landless and hazards such as epidemics (including dengue fever):

“Sanitary types of epidemics are occurring in the slum areas. We have declared Chitwan as an open defecation free district but in practice, it is difficult to manage [and so we are not an open defecation free district]. This is especially due to the increase of landless residents who built houses in the built up areas and do not have any toilets. So water borne diseases can become epidemics. They are a kind of disaster here”.

The Nepal Red Cross official continues by highlighting migration into Bharatpur as an issue. He explains, people move to Bharatpur and reside in informal “unmanaged settlements”. In his words, “every year our population is increasing... and it creates problems here [that can be considered] a disaster”. In his view, due to open defecation and makeshift, informal housing construction in the informal settlements of Bharatpur there is a strong link between rapid (and uncontrolled) urbanisation in some parts of Bharatpur and epidemics.

Three nurses interviewed explain the biggest urban risks in Bharatpur based on number of patients in their hospitals are road accidents and respiratory illnesses caused by air pollution. In the World Disasters Report of 2014, Cannon (2014a, 15-17) describes the importance of road accidents as a significant risk. “There are many types of risk, and the ways that culture interacts with them are often evident, for

example with road safety. This is pertinent, since in many ways death and injury on the world's roads are far worse than those caused by natural hazards". According to the World Health Organization (2009, 10), "over 90% of the world's road fatalities occur in low- and middle-income countries". Globally, more than 1.2 million people die on the roads every year, many of them pedestrians (Ibid). The range of everyday risks and hazards in the view of local stakeholders (local and district level government, Red Cross and nurses amongst others) includes fire, flood, wild animal attacks, and earthquakes but they also include road accidents and urbanisation. Urbanization is a slower onset event rather than a high magnitude hazard. The impact of urbanisation and informality of landless residents and lack of infrastructure may be more devastating long term than other hazards in Bharatpur according to these respondents. This is supported by the work of Dodman et al, 2013; Mitlin and Satterthwaite, 2013 and Satterthwaite and Dodman, 2013.

4.4.3 Earthquakes and control

Attitudes in Bharatpur towards earthquake risk were similar amongst respondents who were interviewed before or after the high magnitude earthquake of April 2015. Those respondents who were interviewed both before and after the earthquake did not change their minds about the priority of the earthquake hazard in relation to everyday risks and other hazards discussed earlier in this chapter. Earthquakes did not rank high. After the Gorkha earthquake in April 2015 and the hundreds of aftershocks, many respondents in wards 4 and 11 continue to say, "Chitwan is safe, Bharatpur is safe". Their rationale is that since there was no loss of life and only old decrepit buildings collapsed during the earthquake and the aftershocks, Bharatpur is a safe place. "People normalise threats" (Bankoff et al 2015, 9) and this is clearly evident in the responses of the respondents. Respondents did not rate the earthquake as more important than their everyday worries (issues which impact their families directly or risks perceived in relation to the city). In Chapter Six, the Gorkha earthquake is discussed in more detail. People's worldviews influence the way in which they "deal with the dangers they face from natural hazards" and "are often connected with the livelihood activities people engage in and the environments they construct" (Bankoff et al 2015, 2). Respondents are dedicating financial and social investment in the city; they continue to believe Bharatpur is "safe" in their words.

The way in which a society accommodates natural hazards and its “constant exposure to threat is important to the generation of its present culture [and] deserves serious consideration especially in the case of societies who are geographically located in hazard-prone land masses” such as Nepal (Bankoff 2003, 183). Judgements people make are heavily influenced by people’s beliefs, attitudes, “as well as their wider socio-economic values and pressures” (Haynes et al 2008, 260). This research shows the importance of Haynes et al’s argument. In considering the answer to research question one, what are the risk perceptions of residents in the city, it is important to consider not only the risk perceptions of respondents in relation to their own lives and those of their families, but also to the urban environment they live in. There should not be a separation. Key respondents from wards 4 and 11 as well as municipal leaders (local authorities, nurses, head teachers, business associations) all state Bharatpur is safe (before and after the earthquake). Pieterse (2013, 12) beckons us to consider the full spectrum of risks in the urban. In order to do this, understanding the risks (worries) from the individual level and upwards to other scales allows not only for a “more credible account of everyday urbanism” but also an understanding of the relationship between risks posed by everyday life in the city and hazard events.

Rita Devi is aware of the possibility of earthquakes but does not think it is a source of risk – even after the earthquake upon my second visit to her in September 2015. Rita Devi explains that she does not worry about earthquakes since earthquakes are beyond her control. This emphasis on what is within a person’s ability to control is a common refrain amongst respondents in both wards. They explain that there is no point on dwelling on earthquakes and what could happen in the future since they, as individuals, have no control over earthquakes. “The ways that people’s culture contrasts with DRR rationalities is most evident when people give lower priority to risk that outsiders regard as serious. They may be partly because people consider that they have minimal ability to do much about those risks” (Cannon et al 2014, 24). This is the case in Bharatpur. In my earlier research based in the Kathmandu Valley of Nepal, I also found that people were unable and unwilling to focus on infrequent hazard events such as earthquakes and to prepare for them (for example

with evacuation plans and go bags) even if they were informed about the dangers (Ruszczyk, 2014). Very few people in Kathmandu Valley could focus on the future with possible unexpected and unmanageable hazards and risks. Rather, most people could only focus on the short term, the everyday and the need for income generation, the same can be found in Bharatpur, Nepal.

Narayan from ward 11 explains that he does not worry about hazards and there are not many hazards in the city. Even though he experienced the earthquake in April and he is more fearful of earthquakes as a natural hazard, his family will be safe if another earthquake strikes in his opinion. Narayan believes his family's response post earthquake, (staying outside and sleeping outside for five nights) was sufficient. The earthquake induced small cracks in his newly built house and ground floor shop do not particularly worry him. "People – more or less willingly – trade off everyday benefits against the danger of the less frequent physical hazards [an earthquake in this situation] that can affect those locations [his shop and home]. In effect, they [people] 'discount' the future risk of a big event in order to reap the day-to-day benefits of their livelihood" (Bankoff et al 2015, 8-9). Narayan's life's savings are in this newly constructed home and he needs to incorporate the earthquake sequence into his everyday life.

4.5 Necessity to link everyday perception of risks and natural hazards

In order to understand earthquake hazard and how to enhance resilience to earthquakes, it is imperative not to focus on earthquakes as the initial object of inquiry. Rather, this research highlights the relevance of engaging with the everyday and what residents perceive as their risks. People select certain risks for attention (Douglas, 1992) while ignoring others.

4.5.1 Natural hazards are not the priority

In this context of infrequently occurring natural hazards, earthquakes are not the priority for urban residents in Bharatpur. They do not have the desire or willingness to worry about hazards that are less frequent and for which they do not have control. Similar findings have been found in both rural and urban settings, people prioritise

livelihood opportunities rather than disaster risk (Cannon et al, 2014; Oven, 2009). For example, Oven (2009) highlights the relationship between the everyday with its focus on livelihoods and hazards in her research in rural Nepal. Households in the Upper Bhote Koshi Valley adopt risk-avoiding strategies towards everyday risks they encounter, rather than the comparatively infrequent geophysical hazard of landslides. Oven (Ibid) found residents to be more concerned with addressing livelihood concerns. In other rural based research in Nepal, “these local interpretations were not a misunderstanding of the potential severity of the macro-scale landslide hazard, but were indicative of a different understanding of hazard and risk” (Oven and Rigg 2015, 693).

Other academic research has unearthed a similar relationship. Barberi et al (2008) suggest people perceive everyday issues of crime, trash / pollution and public services as more important than the risk posed by Vesuvius. In Australia, Buckle et al (2003) found residents to be very knowledgeable about local hazards (flood and fire) but viewed risks associated with daily life as a more significant threat than what disaster management professionals considered important. What is particularly interesting is that people did not only consider everyday risks associated with “mortgage, managing children’s education and sustaining a healthy, vibrant community and environment” (Ibid, 83) as particularly risky in Australia, but they were also strategically considering long-term risks. Again these risks were more sophisticated than the risk professionals had expected; people were concerned about demographic changes and loss of youth to urban centres as well as changes in agricultural and business practices. Residents were concerned about social and environmental long-term changes, not only hazards.

The same can be inferred from this chapter’s discussion about urban perceptions of Bharatpur’s everyday risks (personal as well as societal in the forms of neighbourhood and ward level) and the relationship with less frequently occurring hazard events. The manner in which risk and also hazards are interpreted by urban dwellers creates a situation where the “risk signature” (Oven and Rigg 2015, 705) of respondents does not map onto the hazard. When academic investigation begins with hazards, as I did originally with earthquakes and Oven and Rigg (Ibid) refer to

landslides in Nepal and the Indian Ocean Tsunami in Thailand, “our object of attention is the point and immediate surroundings of an event, be it a landslide, tsunami or earthquake. But both the production of risk in the first place and the human impacts in the aftermath of an event make subtle traces to other, sometimes distant, geographical contexts.” It is these contexts and the interplay between them that this doctoral research seeks to make a small contribution towards understanding.

4.5.2 Hierarchy of risks

Cannon and Muller-Mahn (2010, 625) argue, “people rarely mention sudden disasters in their list of the risks they face, and often give higher priority to problems like illness, water supply, security, unemployment or traffic accidents”. To further this point about the relationship between different types of risks, Cannon (2014b, 68) proposes there is a risk hierarchy for people as represented in Figure 4.3 below.

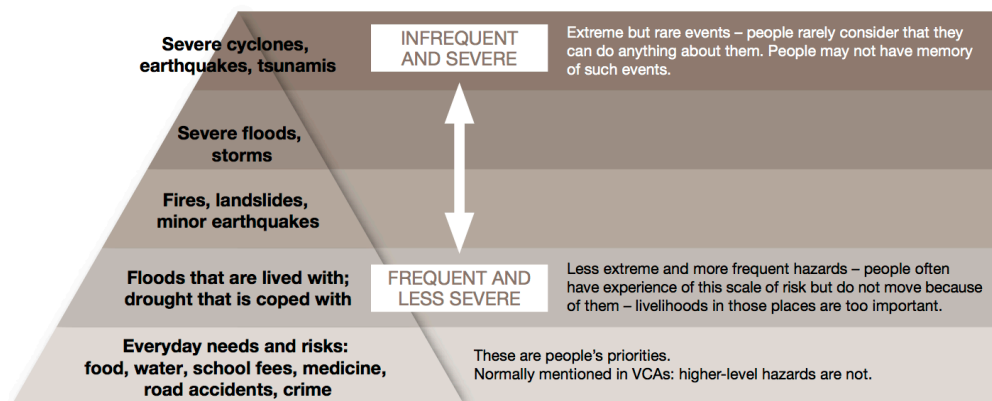


Figure 4.3: Cannon's risk hierarchy (2014b, 68)

Cannon's hierarchy of risk appropriately reflects the perceived hierarchy of everyday risks (expressed as worries) by the respondents in this research. Bharatpur is a city that does not have much interaction with more frequent but less extreme hazards as other medium sized cities of the global South do. For example, Sou (2014) found that hazards such as landslides are linked to regularly occurring small-scale urban disasters and have an impact upon housing construction in Bolivia. Construction of

homes that can withstand mudslides is being used as a form of disaster risk reduction in Bolivia. Cannon (2008) stresses that livelihoods is the most important worry for people and impacts all other aspects of their lives. Cannon et al (2014, 13) suggest there is a relationship between culture and risk. “The key issue in relation to risk [perception] is that culture operates in particular ways that affect people in their norms and assumptions about daily routines and practices” as well impacting the temporal aspects of what to perceive as a risk in the short term and long term.

Most essential for Bharatpur’s residents is economic security or secure livelihoods. The strength and resilience of the livelihoods strategy is based on where the income is earned and if remittances (in various manifestations) are included. DFID (White et al, 2004) and Shepherd et al (2013) also support the view that people are more concerned with everyday risks that are linked to livelihoods than infrequent natural hazards. Livelihoods and health as a resource are linked as evidenced by the businessmen who considered their health as the most important worry in their lives. Their health is intertwined with livelihoods and economic security (Krishna, 2011). Cannon (2014b) suggests that people with good levels of wellbeing (including health, high levels of education) are better equipped to deal with a natural hazard. Respondents who are tenants are also particularly aware they are excluded from social groups in their neighbourhoods and are more vulnerable to risks. Only if short-term everyday risks are managed, can the temporal focus of respondents change to the long term and the future, with hope for the future manifest through the desire for good quality education for children.

Cannon (2014b, 75) suggests that a strong link still needs to be made between livelihoods and disasters. “People’s livelihoods are their first ‘line of defence’ against disasters: it is the basis for their nutrition, their baseline status and their general health and welfare”. There needs to be a renewed commitment to identify linkages between the everyday and more infrequent events or the (non) “exceptional” as Varley (1994a, 2) describes disasters. Until recently, risk was linked with natural hazards and disasters but lacked “a clear home in development and aid architecture” (Christoplos 2003, 96). This strand of research into risk perceptions of urban residents in a medium sized global South city allows for people

to be at the basis of a discussion of the everyday and of more infrequent events. By understanding how people “perceive and seek to deal with” their urban reality full of risks (Ibid, 97) focused on livelihood strategies and addressing a range of perceived risks, a space is opened where risk can be rooted at the centre of discussion. By paying attention to the views of the urban majority, hopefully, the debates about risk can be advanced and the normative differences between the everyday and the exceptional can be minimised.

4.6 Conclusion

In this chapter, research question one has been answered (What are the risk perceptions of residents in the city). Respondents’ risk perceptions are based on a combination of factors including their location in the city, house ownership and the relationship of income levels, source of income, caste / ethnicity, as well as length of time in the city. Ward 4 respondents were found to be heterogeneous in their responses to everyday worries (health, employment, education, housing and community) concerning themselves and their families. Ward 11 respondents were more homogenous in everyday worries (economic concerns) as well as in perception of hazards.

The respondents’ everyday worries focus on perceived risks impacting themselves, their families and their neighbourhoods in wards 4 and 11. Respondents worry about economic security (in the form of jobs and international remittances) and their own health. If they are tenants (ward 4), they worry about not owning a house and thus not being allowed access to some social support systems in the urban. Lastly, more affluent respondents (in both wards), have the luxury to consider longer-term worries and describe good quality education for their children as the most important worry. Respondents stress rapid urbanisation and poor infrastructure as everyday worries. In ward 4, they are concerned about air pollution and waste in the tributary and river. In ward 11, the respondents worry about the poor quality roads and lack of basic infrastructure. Respondents view hazards in the city in the form of fires, floods and earthquakes. They also worry about occurrences such as road accidents and wild animal attacks. Most residents focus on the everyday risks of their lives and on issues they have some control over.

By understanding risk perceptions and what is relevant to respondents from the empirical work in the everyday – insights can be furthered in a more fruitful way to consider the inter linkages between multiple scales (household, community, municipal, national and international) in urbanising contexts. This can allow a link to be formed between the everyday and less frequently occurring events such an earthquake. In the next chapter, social forms of engaging to address some everyday worries in the urban social space are explored. Groups created by residents in wards 4 and 11 are presented through which everyday coping strategies and emerging forms of resilience and reworking are explored.

Chapter 5 The urban ‘we’ in the everyday

5.1 The urban ‘we’

Peake and Rieker, paraphrasing Simone (2004), argue “the urban, now more than ever, is a political stake that opens up and close off new possibilities and constraints” (2013, 12). When considering the everyday urban landscape in Bharatpur, the individual does not have much power and control especially if the individual is a woman. In this empirical chapter, research question two is answered, “How do residents address their risk perceptions”. Social forms of engaging in the city are explored in the form of localised geographically based community groups: women’s groups and neighbourhood groups called tole level organisations. Through this empirical chapter, the collective acts of managing perceived everyday risks are being made visible. Of significance, the groups allow for ‘we’ feelings to be created and maintained in a rapidly changing environment. This ‘we’ ness (Simone 2015, 2) can not be underestimated because it allows for unexpected maneuvering by groups of people who based on their histories would not be expected to work together as Simone and Fauzan (2012) found in Jakarta. This is how the urban disrupts relationships and allows new workings or manoeuvrings to transpire and at times to create new spaces for collective forms of ‘resilience’ and ‘working’ (Katz, 2004) to address perceived risks.

In the Philippines, where natural hazards and disasters regularly occur, people have organised over decades in formal and informal associations and networks devoted to mutual assistance. Thus allowing people to withstand and prepare for unexpected misfortunes. Bankoff (2007, 338) argues, “perhaps the important role hazard has played in the daily life of its peoples encourages forms of mutual dependence and cooperative activity”. Bankoff (Ibid, 347) continues, “only together do people have a better chance of facing the perils of everyday life in the islands: there are dangers to going it alone in the Philippines”. In urban Nepal, there can also be dangers to going it alone but not necessarily due to hazard events. There is a range of perceived risks (presented in Chapter 4) for respondents and their families and also for their neighbourhoods and wards, therefore some of the residents are organising to address their perceived risks and hazards.

These groups are not necessarily sufficient for its members to thrive, but they are essential to providing minimal levels of support to each other and to others in their communities. The empirical work showcases groups who provide urban infrastructure in the form of physical, social, environmental and financial services that can be viewed as forms of community resilience or community reworking (Katz, 2004). The groups warrant discussion because this is the form through which residents strive to address their everyday risks. Residents strive to be noticed by the local authority and to have a relationship with the government in order to address some of their perceived risks, to be “in the light” of the government. The local authority acknowledges these collective resilience and reworking strategies only when it finds the groups and their actions relevant. Otherwise residents are unseen and unheard in the gray space of informally controlled by the government, resulting in their perceived risks not being addressed.

5.2 Informal groups of ‘we’

Some urban residents have carved out informal groups on a neighbourhood level, enabling residents to address in some manner their perceived ‘threats to society’ (Pidgeon et al, 1992) that they are unable to address on their own as individuals. Residents are organising informal collectives in the form of neighbourhood groups called tole level organisations and women’s groups.

5.2.1 UNDP and tole level organisations

The profiles and level of influence of the tole level organisations (TLOs) in the city differs in the two case study wards. This reflects that TLOs vary depending on the length of existence of the TLO, location (wards 4 or 11) and social / financial status of the members. TLOs are a voluntary grouping of self-selected residents primarily homeowners from the same geographic area, comprising approximately four-blocks and between 50 and 150 households (most frequently approximately 100 households). This information is based on numerous interviews. There is never geographic overlap of these neighbourhood groups; rather in places there are no TLOS (where many tenants or businesses are located such as in ward 4). Men, with

limited participation of women, are managing the TLOs through committees. This self-organisation on a geographic basis has been taking place for at least fifteen years (since late 1990s).

These older TLOs in Bharatpur were established under a UNDP project called Rural Urban Partnership Project. RUPP started in 1997 working in 13 municipalities (of which Bharatpur was one) and concluded in 2007 working in 30 municipalities. According to an UNDP Nepal interviewee, the purpose of the UNDP tole development committees (TDCs) was three fold: poverty reduction including saving and credit schemes, social development (addressing health, sanitation, disaster and pro poor infrastructure) and lastly, planning and governance (linking people to local government). The UNDP unsuccessfully lobbied the central government to introduce the TDCs as a lowest level of formal government in Nepal (one level below the wards).

Parallel to the project's implementation and institutional support of TLOs/TDCs, local elections were held in 1997 and the elected officials served their five-year term. The king subsequently dissolved local representation due to the ongoing conflict with the Maoist rebels and the state of emergency. Since 2002, the lack of elected representation on a municipal and ward level has created a space where the ability of residents to influence the urban local authority is opaque. The project was terminated when it became evident to the UNDP that elected mayors would not be reinstated in the foreseeable future and TDCs would not be legalised as a formal layer of government. During the life of the UNDP project, these local organisations were formally registered at the municipality thus creating a direct link with the government. After the completion of the project in 2007, the TDCs as a form of community organisation continued in Bharatpur with organic adjustments for local context emerging over time.

5.2.2 UNDP and INGO established older TLOs

At the present time, TLOs serve social, financial, environmental, and physical infrastructure functions in the city. The TLOs are shaped by the priorities and risk

perceptions of the male dominated leaders. The ward 11 retired army officer key respondent explains:

“The TLO co-finances construction of roads, the tole raised money for the [2015 Gorkha] Earthquake victims and sent relief items to devastated villages. Tole also has a savings and credit [scheme], they put money in the bank and give a low interest rate [on loans] so people are happy”.

These informal organisations, with a heterogeneous mix of ethnic, indigenous and high caste individuals, continue to exist and are valued by its members. For example, in ward 11, where Shankar lives, there is a TLO with the pseudonym of Lama Tole. It is comprised of indigenous Kumals and ethnic groups. This TLO is an example of the importance a neighbourhood group possesses for social and physical infrastructure development. Lama Tole has the appearance of a village. The tole is centered on the intersection of two newly paved roads comprised of single storied dwellings built 20 – 30 years ago by ethnic groups including the Tamang as well as the Kumal indigenous population who have resided here for generations. Each household is comprised of four to five people. The daily rhythms are based on agriculture and there are many cows, goats and chickens. The Lama Tole was established 14 years ago as a “partnership programme with the municipality” (as part of the UNDP project) according to the president of the Lama Tole. All 108 households are members of the tole. As a member of the Lama Tole management committee explains:

“It has created a “we” feeling! We are more integrated, we have a sense of “we” feeling through the TLO, it has created a sense of helping others and regarding the economic aspects, the saving and credit is very useful. If we have any problems or accidents, we try to solve it as a group. This is the most important aspect of the TLO”.

The leader of the Kumal indigenous group explains that the area historically comprised of predominately Kumal and Tamang groups but there are also people “coming from the outside” (from beyond the district) – other ethnic groups such as Gurung and Magar as well as the Brahmin and Chettri castes. It is now a heterogeneous ethnic and caste area. The Kumals joined the Lama TLO five years after it started (it is unclear why they were not members from the TLO’s inception). The indigenous community leader believes participation in the Lama tole:

“Has played a major role, a positive one, in mixing with other people. Being in the group, we [Kumal indigenous group members] can also learn SO

MUCH from other communities as well. Like positive aspects, how to behave with each other, their etiquette, their manners, so it has helped [Kumal people] to better integrate with the community. Otherwise, we used to live only in the pocket [segregated, alone]. Now it is more like a mixed community”.

Many of the TLOs in Bharatpur are heterogeneous or ‘mixed’ in terms of caste – Brahmins and Chettris, ethnic groups such as Tamang and Gurung and also the Kumal indigenous group according to all respondents interviewed in both wards. The neighbourhood groups are not segregated based on caste or ethnic group. Groups that one might not expect to work together are actively working together. As observed by Simone and Fauzan in Jakarta (2012, 146), “the modality of [urban] negotiation seems to “forget” ethnicity as soon as it is engaged. What is important are the negotiations themselves as a context in which residents can continuously realign their efforts and break open new potentials for accessing information, support and resources”. Both the ethnic and indigenous communities stressed the benefits of participating in a group. Simone (2015, 2) suggests that in cities there is a “constant struggle to build solidarity without dependency on collective identity”. These older ‘mixed’ TLOs are aware of this tension to create solidarity but to keep their own identity as well, thereby using the word ‘mixed’ in describing their group. An important benefit is social learning amongst group members in the TLOs and between TLOs. Participation in the neighbourhood group allows individuals who may not understand how to adapt or function in the rapidly changing environment to learn from others who are also learning or from those who have learnt to use their connections to make positive changes to the community.

In 2011, an INGO started a governance project linking ‘slum dwellers’ to the municipal authority on the outskirts of ward 11 near the forest. Five TLOs and several women’s groups were established under this project. These self-identified ‘backward communities’ (because they lack access to physical infrastructure such as paved roads as well as regular access to electricity and water) have lived on Jungle Road for decades. Prem and Laxmi, key respondents from Chapter 4, live here. Most of the people are day-wage labourers working in agriculture and this area is a mixed community of dalits, Brahmins and ethnic groups. The residents own the houses but not the land. These mixed groups are pleased with the project because

they had learnt “the ways to access support” from the government according to a TLO leader interviewed. They understand the necessity to communicate directly with the municipality and to bypass the ward level because the ward level does not have much power in their opinion. This raises an issue for the future. How will these TLOs manage a relationship with the ward secretary when the municipality will most probably cease to engage with these TLOs directly once the donor intervention is completed? The TLOs may need to learn how to engage with the ward secretary and learn how to present their case for infrastructure investments in the future. Most probably, the ward secretary will not be interested to give them a special status (due to INGO support) but rather will force them to work in the same manner as other TLOs in the ward.

5.2.3 Self organised TLOs

More recently created TLOs (less than three years as of 2015) are also organised on the neighbourhood basis similar to the older TLOs but they are being created by affluent high caste newcomers and not by INGOs. These new TLOs are able to address in a collective manner some of their perceived urban everyday risk in relation to poor physical infrastructure. They appear to have the social connections to bring infrastructure to their neighbourhoods faster than the older TLOs. The newly created TLOs in ward 11 are more powerful than the newly created TLOs in ward 4 in creating links with the local authorities. Narayan from ward 11 states:

“Our TLO is 2 years old. There are 100 households in the TLO. It was started in order to make a link to the ward secretary and municipality. People group themselves so they could talk to the municipality about physical infrastructure. The TLO also works for [environmental] cleanliness and when people are in social need... The TLO is more or less inclusive”.

The last comment about inclusivity will be discussed in detail in section 5.5.4 (the excluded residents). These newly formed TLOs are very active in their communities and quickly learn how to access government resources for the development of their local areas. This is visible to track by the location of where paved “pitched” roads have been put in place in the recent past. In this environment, the Citizens Village Tole and its president are representative of the newly emerging self-organised toles. In ward 4, Ram Prasad, the Citizens Village Tole President (CVTP) is a charismatic, energetic man in his early fifties, of the Brahmin caste. Ram Prasad is also a

newcomer to Bharatpur, having arrived less than ten years ago. He has built a three-storied building in the centre of ward 4 on a quiet street perpendicular to one of the main thoroughways of ward 4. He is retired, a self-titled “social worker” engaged in community activities. The occupation of social worker in Byrne and Shrestha’s research in Nepal suggests an individual who is “building social standing and trust” (2014, 447). His economic needs are met through renting out residential and commercial space in his building as well as financial support from his son living in the USA. This economic security allows him to focus on other everyday perceived risks. The CVTP perceives the physical state of his neighbourhood as his most important everyday risk: the need for paved roads, drainage system and cleaning a polluted tributary.

Two months before I met Ram Prasad in November 2014, the tole president established the Citizens Village Tole because he was dissatisfied with the slow pace of municipal infrastructural provision to his neighbourhood. The four-block area is a densely inhabited heterogeneous mix of increasingly middle class three-storied housing units (home to approximately 100 households) near light manufacturing businesses some of which have been there for decades. During the three fieldwork trips in Bharatpur, it became evident how quickly Ram Prasad, the CVTP, learnt to manoeuvre with government officials on a ward level and nascent attempts on a municipal level. This can be seen in Table 5.1 highlighting changes documented by the CVTP.

November – December 2014
<p>“Our tole is very dirty because no one sees us. Two months ago we made the tole, the citizens village. I am president of this tole. There are many problems. There are poor people who do not have clothes. There are factories, pollution, plastics factory and meat processing, slaughterhouse, there is a small river, Punikola, and near there is a vegetable market of the municipality. They throw rubbish and toilet in the river. No one sees this”.</p> <p>“Now every month, we clean. Now everything is better than before. Things are peaceful right now. We are trying.” He initiated a cleanliness campaign whereby the wives of TLO members clean the streets.</p> <p>The president wants the informal settlers, whom he calls “Indians”, to move out of the tole.</p>
April – May 2015
<p>He is continuing to implement his community vision with support from community members and the ward secretary.</p> <p>The area is changing. Three streets have been paved (where there was co-financing from home owners and the local authorities). Five new houses have been built. Some informal settlers (none of whom are Indians but Nepalese people from other parts of the Terai) have moved away.</p> <p>No physical damage due to earthquake.</p>
September – October 2015
<p>“Price of the swampy land in front of the slum dwellers has increased 100% in 10 months. They will soon be moved”.</p> <p>He is pleased with the dramatic changes over the past year. The CVTP has a vision and the members are rapidly implementing it. Other members are pleased with the rapid changes. Most of the informal settlement dwellers have moved due to the new housing construction. Several new houses under construction. The tole purchased drainage pipes and they will be installed after monsoon season. This is their latest success. Subsequently, the road will be paved.</p> <p>Locally, no physical damage after the May 12th earthquake. The president is concerned about expected changes in SBCB’s urban planning initiated after the earthquakes. He is worried that his TLO will not be as powerful in the future.</p>

Table 5.1: Changes in 2014 – 2015 according to the Citizens Village Tole President

Ram Prasad, the tole president is skilled at managing the tole and managing the relationship with the government especially on a ward level. He has the time and the

social power accorded to his caste to be able to network with the appropriate people in the neighbourhood and in the ward. His influence does not extend directly to the local authority yet (this may be partly due to his location in ward 4). Ram Prasad also has the social standing to motivate other homeowners to engage with his vision for a middle class setting in the heart of a mixed usage part of the city. In his view, there is no need for a women's group since the TLO is achieving physical changes in the neighbourhood. According to participants of a focus group discussion held with the Citizens Village, the tole serves as the 'government' for the 100 households in the absence of a presence of the local government. Both the older and more recently created TLOs carve out an informal governance space; they improvise and act where the local authorities do not want to engage. When residents are able to organise, the outcomes of their actions creates noticeable "social changes in urban structure and processes, in demography, and in public policy" (Bayat 2004, 98). In order to address perceived risks in the urban landscape, these neighbourhood groups are negotiating relationships with residents and with the government who can change its mind regarding responsibilities and connections to its residents.

5.2.4 Bharatpur's women's groups

While the tole level organisations are attempting to address collective male dominated risk perceptions of the city, women's groups are the other form of collective also addressing risk perceptions in Bharatpur. Women organise themselves into women's groups (or mother's groups in the Nepalese language) with 60 – 100 members, on a geographic basis that appear to overlap with the tole level organisations, if TLOs exist. The groups are between one and ten years old (mostly around two years old as of 2015) and for the most part have been established without donor intervention. Rocheleau et al (1996, 18) highlight "women's evolving visions of their rights, roles, and responsibilities and they are aided by participation in groups and organisations". The women interviewed explained that they wanted to establish groups because they worried about some issues that were not being addressed locally. Some of their perceived risks could not be managed on an individual level.

“Women are central to the life of the neighbourhood and communities [and] they assume leadership positions in these struggles” (Mohanty 2003, 515). This can be seen not only in India (Mohanty’s research site) but also in different ways in this intra-urban comparison. The women’s groups provide a range of services: social support to each other as well as to vulnerable groups in the neighbourhood who are not members, access to a group savings and credit scheme, organisation of festivals and lastly, environmental cleanliness campaigns in the neighbourhood (the women clean and tidy the streets). In ward 4, the women’s group members, led by Rita Devi (respondent from last chapter), explain the range of activities during a focus group discussion:

“This women’s group helps the poor women in the group when they have problems such as the death of a family member. We also work for health and sanitation in the community. We also manage problems in some households. We help children in poor families with stationery [for school]. We also provide food to old age people. We also do savings [scheme] and the people in need can use the money on a rotation basis”.

They support each other as well as other women in the neighbourhood and the elderly. The group also attempts to influence ward level decision-making although with minimal success. In another women’s group in ward 4, the Little Flower Women’s Group, the women also provide a range of services in the wider geographic community. Dilu, a key respondent from ward 4, is a newcomer to Bharatpur. She is a well-educated Newari woman who has worked for an United Nations agency. Dilu, is a social activist, originally from Gorkha (hills of Nepal); she and her family (husband and children) moved to Bharatpur for the educational facilities and they are now well integrated into the community in her opinion. Dilu is a community leader: a strategic advisor to the Little Flower women’s group, an active member of a financial cooperative, as well as being active in the TLO. Dilu speaks of the power of women and their ability to solve problems in the community. She explains that women’s groups offer a range of social services: they support children who cannot access schools due to lack of money, they intervene in domestic disputes as well as attempt to address alcohol and drug abuse in the community. With Dilu’s support, a focus group discussion with the Little Flower Women’s group was organised (which took place two hours after the Gorkha earthquake).

The members of the Little Flower Women's Group include housewives, teachers, and are 'job holders' (the respondents' term); many of their husbands are absent – they are abroad working. These women are primarily Brahmin and Chhetri caste and are newcomers who have built homes in a section of ward 4 that is rapidly transforming into a middle class area. During the focus group discussion, they explain that the purpose of the women's group is to integrate all the women in the area (later I learnt that this only included house-owners). Through participation in the Little Flower Women's Group, they can interact with other women otherwise they are restricted to their houses if they are not employed. Through the women's group, they can learn about different subjects, they build relationships with others, and make networks that can support them in a time of need.

In ward 11, the one-year-old women's group on Jungle Road, was created with the support of an INGO project targeting 'slum dwellers'. The project established women's groups and tole level organisations with the aim to link them to local government services (as was mentioned earlier in this chapter). Amongst the everyday worries for members of this women's group, they stress the need for income generation opportunities and their infrequent risk includes the threat of tiger and rhinoceros's attacks from the community forest adjacent to their homes. They have learnt the value of participation in a community group; the women's group has changed the way they (as women) interact with the newly established TLO and the local government. They continue to lament the fact that they have not addressed their primary risk perception and have not learnt any livelihood skills and are keen to possess these skills. They value the opportunity to share their household and family problems with other women and also to learn about health programmes. The representative explains that participation in the women's group:

“It has made us aware; we did not know how to speak before, now we are confident... We are proud of our cleanliness campaign [to pick up litter] and also the fact that we are more aware. We save money and distribute to each other in a time of need. Controlling this money, this gives us grounds to participate, we can now speak to the men, and we have a voice”.

Of critical importance for all women interviewed was participation in women's groups. Women value participation in the women's groups more so than participation in TLOs because their voice is heard – their opinions matter more in the

women's groups rather than in groups where men dominate discussion and action. Through participation in women's groups, women gain financial power as well. In ward 11, the women's group on Jungle Road is keen to address a risk that impacts most families – lack of livelihood opportunities. Most key respondents in ward 11 mentioned this perceived risk. On a collective level, economic security can be addressed not through job creation but through a safety net in the form of group lending. Women valued the guaranteed financial support in case of emergency. While the male dominated TLOs perceived and addressed risk in the form of physical infrastructure in their neighbourhoods, women's groups address a broader range of perceived risks in their communities. Collectively, the women's groups have formulated a broader hierarchy of worries they attempt to address in their neighbourhood. These perceived risks might not be directly related to themselves or their families, it may be other families who are in need of support in their everyday lives.

5.3 Community resilience or reworking the urban

The concepts of resilience and reworking are a lens to consider the two forms of informal groups addressing perceptions of risk in the urban everyday of Bharatpur. Cindi Katz explores the concepts of resilience, reworking and resistance on politics of social reproduction and everyday life in Sudan and Harlem. Katz (2010, 318) distinguishes “between practices of resilience, reworking, and resistance so as to better understand the subtleties of people's oppositional practices and not overestimate their counter-hegemonic effects (Katz, 2004)”. These shifting forms of resilience and reworking, the tensions and conflicts that arise are explored through the TLOs and the women's groups. The ways in which urban residents present their differing interpretations of ‘resilience’ to uncertain everyday life as well as their attempts to rework (Katz, 2004) the urban fabric is explored in this section. This section also explores the tensions between the two groups.

5.3.1 Women's groups as resilient urban infrastructure

Even though women play a fundamental role in the community and ensure the social and environmental infrastructure of the community is maintained, they are often

unseen and under-theorised (Mohanty, 2003) in the urban setting. Women's groups are the resilient urban infrastructure utilising Katz's understanding of resilience (2010, 318):

“Resilience, as the name suggests, is a means of getting by and recuperating one's self, community, or resources in the face of dominant social forces. Resilience expresses and fosters what Gramsci (1971) called autonomous initiative”.

In ward 4, the women's groups are visible and serve a vital social, economic and environmental role in addressing everyday perceptions of risk. Due to geographic gaps in TLO coverage, the women's groups are leaders in many areas associated with urban society in the mixed usage commercial and residential part of the city. Rocheleau et al (1996, 157) argue: “Relying on social capital is part of a survival strategy which is frequently, though not exclusively, gendered due to different socially ascribed roles that women and men play in the private and public sphere. Whereas men in many regions tend to play a greater role in community politics and the cash economy, women are responsible for community management as a ‘natural extension of their domestic work’ or reproductive labor”. Utilising Katz's understanding of resilience, as a “means of getting by and recuperating one's self, community, or resources in the face of dominant social forces”, women's groups can be viewed as a form of resilient urban infrastructure.

Women's groups in Bharatpur provided a vital social, environmental and financial infrastructure to the urban fabric. Through the social form of a women's group, they provide resilience to their members and families; they create the community in a small geographic area. They are proud of their accomplishments and their collective support mechanisms to address perceived everyday risks. The women understand the value of the services they are providing and are dissatisfied with the invisibility granted to them by men, the neighbourhood groups and by the local authorities. Several women's groups highlight limitations of the women's group due to social constraints imposed by men (women need permission from husbands to join women's groups and men dominate women's groups meetings when men are present) and the government (who is not interested to engage with urban worries – risks as articulated by women). This is the same local authority that is willing to use

women to clean the streets and to serve an environmental maintenance function in the city.

Women's groups at times are a source of tension for the male dominated TLOs and power relations are tested. Tensions arise in ward 4 when women's groups become too visible (in relation to TLO or financial cooperatives) in terms of their activities and too powerful in terms of the money they have under management. Subsequently, attempts are made to take away the financial resources of the women's groups and to decrease their ability to function. Power dynamics between TLOs and women's groups force women's groups to be (only) resilient infrastructure in the urban. Relationships are negotiated, often to the benefit of the male dominated groups. In ward 11 the tole level organisations are powerful and influential (partly due to the newcomers' caste status). They do not generally support the establishment of women's organisations suggesting that women do not need their own groups since "TLOs take care of everything" according to a tole president interviewed. If women do have a group (in an area where a TLO exists), the women's group will have a savings scheme and will also implement the desires of the TLO including environmental cleanliness.

According to the president of a tole in ward 11, "The tole level organisation looks at the overall problems of the community but women's groups - they are only confined with women's problems". This translates into risks perceived by women in relation to social issues, children's education, health for the family and other everyday worries. In ward 11, women's groups are noticeably less visible or the women's groups are 'managed' by the TLO. A member of a women's group on Jungle Road in Ward 11 (created through an INGO project) comments on the one-way relationship with the TLO and the municipality:

"Lines of communication flow from muni – to – ward – to – TLO – to – women's group. This is the process. We work on how to implement it [what others decide is important]".

Stronger, more influential TLOs are effectively silencing women and their significant potential for collective action. Women's groups are allowed to be

resilient urban infrastructure but are not allowed to do more, not to rework the city in their vision.

5.3.2 “Being in the shade” and invisible

Escobar (2012) discusses how discourse, visibility and power are interconnected. He suggests if people are brought into conversation, then it “consign[s] them to fields of vision” (Ibid, 156). People want to be seen by the government. Peake and Rieker (2013) explain that women’s organisations in the global South have argued for women’s engagement with social and collective rights and issues above those of the individual. They argue that “women are an important node in the constellations of power, and thus in the production of centres and margins, in imaginaries of the urban” (Ibid, 2). Dilu, the strategic advisor to a women’s group in ward 4 explains that women’s groups are “working but we are in the ‘shade’, not in the sun” of the local authority. They wish to be seen, acknowledged and engaged by the government. Chant (2013, 1) argues that there is a “stark contrast between women’s input to and benefits from the accumulation of wealth in cities” [of the global South]. She continues (Ibid, 2): “Women often reap limited reward in terms of equitable access to ‘decent’ work, human capital acquisition, physical and financial assets, intra-urban mobility, personal safety and security, and representation in formal structures of urban governance”.

This can also be seen in urban Bharatpur where the women’s groups reap limited rewards for their significant efforts in providing critical social, financial and environmental infrastructure of the city. They rally for social and economic improvement; they want the local authorities to engage directly with them to address their range of perceived everyday risks. This is not taking place due to the social and political constraints imposed upon them by society and the local authorities. The women’s groups interviewed frequently comment on the fact that they do not have a direct link with the municipality who is very powerful. They are informal organisations and there is no formal mechanism in place for them to engage with the government thus supporting Chant’s claim in the context of the global South that “high levels of women’s activism at the grassroots level do not translate into high

profile representation in formal municipal or political arenas” (Ibid, 16) or even formal acknowledgement by the government. Rita Devi explains:

“We [the women’s group] function autonomously... They [the ward secretary’s office] have not called us into meetings. The ward does not call us and take suggestions from us. But we keep on working to solve problems in our community”.

The women’s group is addressing risks in the everyday, not only risks perceived by its members for their own benefit but also for the more vulnerable members in society. Rita Devi continues:

“We [the women’s group] do not have the power. The municipality have power, the ward have power. We work on behalf of the small people, a small group. We do not have exact power, most of the time when we recommend something related to development or planning, it is not executed”.

The Little Flower Women’s group president explains they are keen to establish a formal relationship with the government rather than having to work through an intermediary, the tole level organisation. The women’s group would like for the local authorities to hear their worries and to work together to address risks. The first step would be to allow registration of community groups and organisations at the municipal office (this had stopped three to four years ago) according to the women’s group president. The women’s group is required to communicate with the TLO who communicates with the ward secretary who communicates with the municipality. This communication channel effectively renders the opinion of the women’s groups invisible and silent to the government. In ward 4, where there are gaps in geographic coverage of TLOs, there is no mechanism in place for the voices of women’s groups to be heard outside of the neighbourhood level. They are effectively silenced as islands of collective governance with minimal opportunities to change the urban situation. The women’s groups are forms of invisible urban resilience but are not allowed the opportunity to collaborate with the local authorities to rework the urban to address their range of perceived risks in the city.

5.3.3 TLOs rework the urban

On the subject of reworking, Katz argues (2010, 318):

“Reworking travels a different register. With more explicit recognition of the social relations that produce the difficult conditions of everyday life, the

practices of reworking are intended to alter if not remake them entirely. The practices and strategies of reworking tend to be pragmatic and focused, staged in the realms and at the scale in which a problem is encountered, although their effects may be much more far-reaching in time, space, and consciousness-building. Their intent is to recalibrate power relations and respond to injustices more so than to challenge the grounds and social relations upon which they are built and sustained”.

All TLO representatives interviewed speak of the benefits of being in a group. Only by working together, as a collective or group, can they “rework” (Katz, 2004) the urban reality, to address their risk perceptions in their everyday life. For example, the indigenous group, the Kumals, has learned how to engage with others, how to work in a social environment that is unfamiliar and the ethnic Tamangs have more money to invest in infrastructure projects through the financial contribution of the Kumals. People are learning how to plan for the future, to make collective decisions that will impact and benefit their community. They solve land disputes and intervene in social matters if necessary. They are acutely aware of the limitations of the local authority. Katz continues by suggesting there are two interconnected aspects to the material social practices of reworking (Ibid, 247):

“One is associated with redirecting and in some cases reconstituting available resources, and the other is associated with people’s retooling themselves as political subjects and social actors”.

The TLOs are not only exhibiting resilient behaviour but they are actively reworking their situation and making vertical connections to the local authority that are allowing them to enhance their environment and address their risk perceptions. The TLOs are not trying to challenge the municipality and the political powers; they are instead attempting to “undermine its inequities on the very grounds on which they are cast” (Ibid, 247). The TLOs have retooled themselves as political subjects that the local authority can work with. They organise themselves into units informally acknowledged by the government and with the financial contribution expected by the government to provide physical infrastructure. Katz (Ibid, 239) utilises the phrase “negotiating the recent future”. This is an apt phrase for the rapidly changing urban reality in which people function but the reality can change very quickly due to events that are occurring on scales that are beyond the control of residents. People comprehend that their area of influence is limited in time, space and place; they can negotiate and rework the recent material future. The time scale for reworking is also

relatively short. People's aspirations are bounded by their experiences with government, society and due to their economic resources, location in the city and other identifying factors mentioned in the previous chapter.

Multiple actors are involved on a local level, creating groups of resilient infrastructure and groups that are reworking the urban environment for the benefit of their constituents. The local authority and other groups such as political parties and TLOs influence whose resilience and whose reworking matters in the city. The TLOs are skilled at managing the women's groups to support community resilience activities but not changing the reality of women for the better. Women's perceptions of risk are not as important as men's perceptions. Women are informed by the actions of the government that they are viewed as forms of urban resilience. Women's groups are not allowed (by the government and neighbourhood groups) to rework the urban for their collective benefit and for those more vulnerable in society. They are constrained in the areas where they can have action. Only the TLOs can rework the urban both in ways the government allows and in ways they can organise for themselves.

5.4 Urban infrastructure in a gray space

For residents who can participate in these groups, (some) residents are able to address some everyday risks and hazards they face. To varying degrees, the neighbourhood groups and the women's groups strive to bring different forms of infrastructure to their communities or serve as the infrastructure themselves in the everyday to mitigate against perceived risks. These forms of urban infrastructure include physical, social, environmental, and lastly financial infrastructure. In Simone's discussion of infrastructure (2004, 419) he suggests:

“Such infrastructure remains largely invisible unless we reconceptualize the notion of belonging in terms other than those of a logic of group or territorial representation. People as infrastructure indicates residents' needs to generate concrete acts and contexts of social collaboration inscribed with *multiple identities* rather than in overseeing and enforcing modulated transactions among discrete population groups”.

It is this weaving of diverse people with multiple identities as urban infrastructure that is useful as an analogy to Bharatpur. People's maneuvering in groups is

represented as territorial because this is the form of urban infrastructure that is being made visible in this research. Through action in informal collectives, people are able to function as infrastructure in the manner Simone describes. These community groups are also working in a 'gray space'. Yiftachel (2009, 250) explains: "'Gray space' refers to developments, enclaves, populations and transactions positioned between the 'lightness' of legality/approval/safety and the 'darkness' of eviction/destruction/death". Yiftachel (2009, 250) continues:

"Communities subject to 'gray spacing' are far from powerless recipients of urban policies, as they generate new mobilizations and insurgent identities, employ innovative tactics of survival, and use gray spaces as bases for self-organization, negotiation and empowerment. To be sure, power relations are heavily skewed in favor of the state, developers or middle class".

This is an appropriate reflection for the urban neighbourhood groups and women's groups encountered. The communities are not fighting against "eviction/destruction/death" (Ibid) but they are struggling to address the risks they view as important to their everyday lives. These collectives of territorial governance are supplying urban infrastructure and influence in an informal gray space of living. These collectives of territorial governance decide what types of risks to address and what types of infrastructure are important to support. The TLOs and women's groups differ in what they view as important to address. The TLOs are particularly interested in addressing physical and financial infrastructure provision. Women's groups are interested in addressing social infrastructure provision (for each other and the more vulnerable residents even if they are not members), financial security through the savings and credit schemes and lastly, are often volunteered by and mobilised by the TLO or their husbands to keep the streets tidy.

5.4.1 Physical infrastructure

The male dominated neighbourhood groups overwhelmingly are working to address a perceived significant everyday risk– the poor condition of dirt roads. The TLOs strive for modernity in their neighbourhoods through the provision of paved roads and not other forms of urban physical infrastructure. The newly formed groups primarily comprised of Brahmins and Chettris have easier access to politicians and to municipal officials due to their high caste and affluence and informally receive valuable information from the government sooner than some of the other TLOs.

Simone and Fauzan (2012, 137) suggest, “Local politics is also drawing upon a new generation of more educated residents who seek to bring more transparent and rational practices of administration to the running of local government”. In the case of Bharatpur, rather than a new generation seeking change, it is the older TLOs who are attempting to change power relations to influence government and to make transparent, until now, informal mechanics of local government.

Based on their research in Nepal, Nightingale and Rankin (2015, 169) propose that people’s ability to make “claims on the ‘everyday state’” depend on social position and articulation with broader political economic currents. This can be seen through the influence of the different caste groups, length of time in Bharatpur, their geographic location in the city and affluence. The Brahmins and Chettris in wards 4 and 11 who have lived in Bharatpur all of their lives, those who migrated into Bharatpur during the past twenty years and also the newcomer Brahmins in ward 4 do not have the same political influence as the affluent high caste Brahmin newcomers who have settled in ward 11. The long-term residents in ward 11 are enthusiastically embracing the methods and links to the government brought by the new comers (irrespective of membership in TLOs). The municipality has informally declared that it will bring modernity in the form of paved roads to parts of the city only where there is a TLO and which can provide 25 - 30% co-financing for the construction of the road. The necessity to raise money from residents and then to co-finance road construction is being understood only recently by some of the older neighbourhood groups. For example, in Lama Tole, even after fifteen years of working together, there have been limited infrastructure projects. The infrastructure projects have included: working with an international NGO to construct toilets and, most recently, co-financing with the municipality the tarmacking of the two main streets. The next project to be undertaken is the installation of street lighting. The local authority does not communicate directly with all TLOs, rather information is communicated informally in a gray space only to some TLOs according to interviews conducted in both wards of comparison and the local authorities.

There are pockets of commercial areas in ward 4 that are not covered by a tole level organisation due to the fact that the owners do not live there, only tenants. There

were no TLOs organised by tenants in ward 4 according to all respondents in ward 4. This results in a lack of representation of residents to the municipality. This is apparent in the appearance of the commercial centre and the potholed dusty landscape. Ward 4 is the commercial area, full of tenants, absentee landlords, Indian nationals, and is mixed use (commercial and residential). It is difficult to engage the municipality into improving ward 4 – with the exception of where the Brahmin and Chhetri newcomers are building homes. Most TLOs in ward 4 speak of their inability to influence the municipal officials to bring infrastructure (paved roads and proper solid waste management). They do not attempt to influence the government to provide paved roads because they do not have the sufficient social power within their mixed groups to strategically manage the relationships as one TLO president explains. They continue to lament their dusty dirt roads that are muddy and difficult to utilise during monsoon. These splintered responses in the city showcase the difficulties in making a change in the urban setting and in elite gray spaces of governance.

5.4.2 Informal financial infrastructure

The informal community groups all have a financial function in the form of group savings. Some also have credit schemes and most TLOs also collect funds for infrastructure projects. Most of the older TLOs in both wards 11 and 4 are predominately some form of a saving and credit scheme because they do not possess the social power to influence physical infrastructure provision. These older TLOs collect 100 or 200 NPR from each member (equivalent of \$1 - \$2 in April 2015) per month and annually they redistribute some of the funds to each participant (retaining 1,000 NPR from each person in the financial scheme). The group members view the financial schemes as a fundamental part of the TLO service provision. The Kumal indigenous leader explains that the landless day labourers are no longer dependent on high interest loans from landowners because access to savings and credit is now available through the TLO. This new form of urban organisation is rupturing historical unequal and destructive practices impacting the most vulnerable. This has somewhat relieved economic pressure on the very poor in Bharatpur and is changing social dynamics on multi scales (individual and community level).

The savings and credit schemes are critical to all of the women's groups interviewed. The Little Flower Women's Group in ward 4 explains that all members contribute 200 NPR monthly and each month, one woman can access the funds (if necessary) - up to 30,000 NPR with minimal interest. The most common uses for the money include medical treatment, private school tuition fees and materials and less frequent cases, construction of a house. The savings schemes provide women with economic empowerment, a financial safety net, and the psychological empowerment of "having a voice" in their community. Every member of a women's group mentions empowerment through finances. For women respondents, participation in women's groups was essential as a form of independence from their husbands and the savings schemes were of critical importance to the women respondents.

Through the provision of informal financial infrastructure in the form of the group saving and credit schemes, both the TLOs and women's groups are addressing the most important everyday risk for respondents in both wards 4 and 11. They are addressing economic security through the financial schemes. The schemes are a safety net if a family faces extreme difficulty in their livelihoods strategy, if health deteriorates, in case of death or other everyday crises. Microcredit schemes have been internationally discredited in the past two decades by highlighting the economic and social burden placed on women to repay (Pearson, 2007). Pearson suggests it is the "collective activity carried out in groups which leads to the 'empowerment' claimed by observers" (Ibid, 208) but this may be fraught with power relations and related issues of exclusion based on caste, ethnicity and class. In Rankin's research on the ethnic Newar communities in Kathmandu Valley, Rankin (2002, 16) suggests microcredit, based on notions of solidarity has the possibility of "entrenching, not challenging, the gender division of labor and power" in communities. In Bharatpur, the women's saving and credit schemes do not provide income-generating loans; rather the group approach enables women to ensure household subsistence and survival, and at times planning for the future. Through the management of funds, the women have control and power to support themselves and other women in a time of need without needing to ask for approval from husbands.

On a local level, there are tensions between women's groups who control their own financial schemes and other financial groups. The Little Flower Women's group explains that the local financial cooperative is not pleased with the power afforded to the Little Flower Women's group by managing their own funds. The financial cooperative has high expenses related to managing the funds while the women's group has minimal expenses due to free labour within the women's group. The financial cooperative wants "this women's group to be dissolved" and the money deposited in the financial cooperative, according to the president of the women's group. On an aggregated basis, the financial value of women's groups financial schemes is high. Given the amount of money under informal management, it is not a surprise there is envy towards women's groups. In another example in Ward 4, the new TLO president explained that the new management of the TLO would no longer "take" the money of the women's group and distribute it to the TLO members. This women's group was very angry that they were not allowed to control their own money and they unwillingly supported the TLO in cleaning the streets and completing other tasks the TLO "asked" of them. In discussions with women's groups in both wards, issues of power, control, and tension filled relationships with TLOs are often raised.

5.4.3 Environmental and social infrastructure

Dilu, who is a strategic advisor of the Little Flower women's group in ward 4, explains how her group serves as environmental and social gray infrastructure in the city:

"The women's group cleans the roads and during religious festivals we coordinate with other organisations. We work for empowerment of women. We solve problems in the community and resolve disputes. Women have great power in the community. We do a lot of work but it is unseen [by the local authorities]. The major issue is that the municipality does not want to communicate with the women's groups. We are working for them, the government, [doing their work] but they still not seeing it".

In the global South, Chant (2013, 1-2) argues: "Women make significant contributions to urban prosperity through a wide range of paid and unpaid labour, including building and consolidating shelter and strategizing around shortfalls in essential services and infrastructure". This can be seen in various ways in Bharatpur.

For example, women's groups are essential in the organisation and implementation of environmental and cleanliness campaigns in their neighborhoods, as well as the regular and ongoing collection of rubbish at pre-defined municipal collection points in their neighborhoods. The women's groups effectively provide governmental infrastructure services related to the maintenance of physical infrastructure. In some cases, this is done willingly and in some cases, the TLOs require the women's group to serve as environmental infrastructure for the city. More often in ward 11 where there are strongly managed TLOs and few women's groups, the wives of TLO members provide the same environmental cleanliness services that women's groups provide in other parts of the city. Miraftab (2007) suggests that in third-world cities, women's informal labour is not only within the family but also in the community through the provision of neighbourhood care and municipal services such as those mentioned above. These forms of urban gray infrastructure provide a mechanism to consider the significant role women enact in the urban. This contributes to answering the second research question (How do residents address their risk perceptions?). Men in TLOs in both wards of comparison view pollution and environmental cleanliness as a worry. The municipality also is interested in maintaining the streets. The local authorities and the TLOs pressure the wives and women's groups' members to serve as environmental infrastructure in the city.

5.5 Governing through acknowledgement and visibility

Existing governance practices in Bharatpur and the ensuing negotiation for space have created multi faceted sites of contestation between the community groups and the government, between the two forms of collective action (tole level organisations and women's groups) and also individuals who aspire to gain entry to these informal groups. We can see in Bharatpur through these collective forms of organisation, how some of the "contested, dynamic processes through which social inequalities in Nepal are produced and entrenched" (Nightingale 2011, 161) but also how some boundaries are being reworked and are shifting in the urban setting of Bharatpur. These "dynamic results of contested practices" (Ibid) and the ongoing forms of resilience and reworking are changing the way informal geographically based groups interact with each other and with the local authorities. At times, reinforcing the status quo and at other times, reconfiguring spaces to the benefit of some groups or

communities more so than others. The informal groups are aware that their everyday forms of resilience and reworking in the gray space is not sufficient to address perceptions of risk on other non local scales. Links with the local authorities are essential for long-term safety and stability in the city.

5.5.1 Forms of community

Communities exist in different forms in the rapidly urbanising city of Bharatpur. There are religious groups, political groups, businessmen's groups and Red Cross groups amongst others. On a local level, the neighbourhood groups and women's groups serve a vital role in the community addressing some residents' perceptions of everyday risks. The definition of community is uniform amongst most stakeholders. The local authority (the Environmental Department and the Urban Planning Department) and other interviewees (the head of a secondary school, and local representative of an INGO) state the word 'community' signifies the tole level, the neighbourhood level. The word in Nepalese is *Samaj* and signifies society and community. At the district level, the District Disaster Risk Reduction representative spoke of people in a general sense when he referred to 'community'. The definition of community is one of the few areas where most men interviewed (in wards 4 and 11 as well local authorities) are uniform in their views. Other groups are not articulated as definitions of community by male interviewees. Only the male dominated groups, even those that are heterogeneous in their composition (ethnic and high caste), are considered community. Other forms of organisation are not considered community by the local authority. This appears at odds with the narrative created by the women's groups, tenants and informal settlement dwellers who articulate the value of informal and formal organisations and the benefits created by participation in any group in the city.

Based on Ghertner's research in Delhi (2011) with neighbourhood associations [of property owners] and this research in Bharatpur with TLOs, the normative aspirational definition of community is the neighbourhood groups who are visible to government. Based on her research in Nepal (2011, 161), Nightingale suggests, "Spatial practices [in this case, the formation of community groups] quite literally open up space for side-stepping hierarchies or attempting to move vertically through

a social order”. Men have been able to side-step hierarchies in some aspects of informal gray infrastructure provision but not women. The women’s groups are often ignored or devalued irrespective of the tremendous value and forms of infrastructure they provide to the urban. Women create change on a local level but struggle to make significant changes in other scales due to their lack of relationship with the government and men’s general unwillingness to acknowledge the role of women in the city. “Gender remains by and large invisible in the articulation of urban policies” (Wekerle 2013, 142) due to this lack of acknowledgement. If women were seen and acknowledged by the local authorities, they could attempt to impact forms of infrastructure that is also important to women – social and environmental infrastructure.

5.5.2 Acknowledged by the government

The local authority does not have a formal connection to community groups (TLOs and women’s groups). There is no formal registrar at the municipality and the local government representatives often do not have a clear view of the number of informal organisations functioning on a ward level. The government does not see a need to have a list of all the TLOs existing in the city nor does the local authority have a map of where they are located even though the local authority engages with TLOs for infrastructure projects. In November 2014, the Secretary for ward 11 explained that he did not know how many toles were functioning in rapidly urbanising ward 11 but said, “the ward was not completely covered with toles”. The new ward 11 Secretary who had been in place for four months on my third trip (September 2015) stated, “there are 47 toles in ward 11. The entire ward is covered in toles”. The new ward secretary appears to be more aware of his constituents. If the ward, the lowest level of government, does not know how many and where the TLOs are located then the ward secretary can not provide the formal link bringing physical infrastructure to all of his ward’s residents. Informal relationships based on caste, length in city and affluence thus are more important between the local authority and TLO members.

Ward 4 differs; the most frequently agreed figure amongst the TLO leaders interviewed and the ward secretary is 18 TLOs. The ward secretary explains there are gaps in geographic coverage for the TLOs in ward 4. This is due to the high

number of tenants and the commercial profile of the ward. Absentee landlords, foreign business owners and tenants are not allowed to join tole level organisations because they do not own a home. The above-mentioned types of people are not worth the social investment according to various respondents in ward 4. This is relevant to the discussion of (research question two) how do residents address their perceived risk. Community groups play an important role in addressing some everyday risks for some residents. It is in this gray space, the government makes visible some residents and decides whom to work with. This level of informality or gray space allows the government to pick and choose whom they deem appropriate to grant government allocated infrastructure thus allowing some residents to address their range of perceived risks.

Due to the insight allowed by the intra-urban comparison, there appear to be more women's groups in the historical city centre of ward 4 than in the rapidly urbanising ward 11. According to the ward 4 women's groups and the municipal and ward-level officials interviewed, there are 'about' three-six women's groups in ward 4. Only Dilu, who is very mobile in the city and has an extensive network amongst various groups, states there are 15 - 20 women's groups in ward 4. From this research, her estimate appears accurate. This difference in figures reflects the common attitude of the government and of TLO leaders: women's groups are not considered worthy of acknowledging but their work is valued on a local level. In ward 11, respondents confidently speak about the neighbourhood groups but not about women's groups. No one is clear how many women's groups exist in ward 11; male respondents do not consider women's groups an important social form in ward 11. The fact that this information is unknown is important when considering the relationship between groups as well as between groups and the local authority. Only some groups are worth acknowledging by the local authority and the ambivalence of the local government towards the women's groups is clear. This is important to urban community resilience and reworking because only some residents are supported in their desire to address risks.

5.5.3 Local authority manages the gray space

Yiftachel (2009, 250) suggests that “in the urban policy sphere, gray spaces are usually quietly tolerated” [by the government]. I argue that the government of Nepal is not quietly tolerating but instead is actively managing the informality of the TLOs and strives to keep the TLOs and the women’s groups in a gray space. In this manner, the government can further its agenda of providing services to those who it deems worthwhile and “visible” – the landowners. It can do this without needing to formalise these arrangements according to a key municipal official of Bharatpur. Ghertner provides an account of Delhi where the government realigned the channels by which citizens can access the state on the basis of property ownership and the government created “parallel governance mechanisms” (2011, 505) where the middle class property owners espouse the government priorities and then help to reconfigure government priorities and service provision. This resonates with the Bharatpur situation with the exception of lack of locally elected representatives in Nepal. The government does not want a direct link with women’s groups and only with some of the neighbourhood groups; the government is ambivalent towards most of them.

The municipality, the ward secretaries, local NGOs, as well as informal settlement dwellers state that if people are not organised into toles, the government does not hear their voice. Benjamin (2004, 184), discusses government and informality, rather than gray space, and he suggests the term “porous bureaucracy” which “captures the fluidity, but also the systemic organization, that provides access and “voice” to many local groups including many types of poorer ones”. The porous bureaucracy allows chosen groups to address some of their perceptions of risk in the urban environment and as importantly, to be the link between residents and the government. A representative of a TLO in ward 11 explains “They [residents] must be related to the TLO in order to get any services from the government”. For the past ten years, the TLOs have developed in different ways in various parts of the city to suit the local reality. The relationship with the government is not transparent and differs for each of the TLOs based on the age of the TLOs, location, and profile of its members. In this way, the porous bureaucracy allows some circulation of support to residents but not to all and not always in the same manner. According to Roy (2009,

84), informality could be viewed as a “feature of structures of power” rather than a grassroots initiative associated with poverty and vulnerability. This type of informality, gray space or even porous bureaucracy appears to benefit the formal government of Nepal more than it benefits most residents or the groups formed by some residents.

The TLOs are a tentative step forward in terms of the government seeing people and their desires but thus far only related to physical infrastructure projects (roads) and only in some TLOs. A key informant from the Municipality explains that the government wants the toles to function; the municipality will not listen to people regarding infrastructure needs unless the needs are articulated by a TLO to the ward and municipality. The TLOs are notified if their 30% co-financing is required to support their neighbourhood. Nightingale and Rankin (2015, 166) propose:

“A feminist perspective highlights links to everyday practices of social reproduction, not only through local bureaucrat’s own social position within the community, but also through the claims made upon them as embodiments of the local state (Ghertner, 2011). By attending to who, how and where different institutions and actors engage with local state (and other sites of governance), we illuminate the mechanism of struggle for authority”.

Several representatives of the older toles in ward 11 are apprehensive regarding the possibility of the municipality dissolving TLOs at the government’s discretion. The older TLOs are aware of how important the link to the municipality is and how precarious and tenuous the link is at the present time. A key municipal representative explains that the municipality is not under obligation to engage with the TLOs and in the future it is unclear how the government will work with TLOs. This is the same government that does not have a list or a map of the tole level organisations in Bharatpur. The former ward 11 Secretary stated that if municipal elections were reinstated, there would not be a need for the TLOs to exist since individuals could put pressure directly on the elected representatives and not need a TLO to act on their behalf. At the present time, the TLOs are an effective coping strategy where there is a gray, porous fragmented and at times contentious relationship with the government and where the residents risk the possibility of no longer being even informally acknowledged by the government.

5.5.4 The excluded residents

In Bharatpur, respondents in wards 4 and 11 have learnt to organise themselves into informal groups in order to address some of their perceived everyday risks. There is a group of people who are invisible not only to the government but to local forms of community: tenants (including both the relatively poor and affluent) and informal settlers. The tenants and informal settlement dwellers are acutely aware of their vulnerability in the city to various risks through their exclusion. All community groups interviewed in ward 4 explain that tenants are not worth “investing in” in terms of time, energy and social support. Respondents explain that if or when the tenants build a home thus gaining identity and visibility through their built infrastructure, they could become members of the women’s groups and the neighbourhood groups. Tenants are clearly excluded from participation in groups due to the uncertainty attached to their tenure in the city.

Most women are in women’s group in ward 4, according to Rita Devi. If there are some who are not members of women’s groups, then “they are very, very poor. They may be concerned about everyday needs and about having their daily meal. They may be daily wage workers who are too busy [to organise]”. Similarly, those who are “provisionally settled” in the city, utilising Simone’s phrase (2015, 1), are excluded from the community groups. Rent paying informal settlement dwellers in ward 4 (where the citizens village tole is located) highlight their precarious situation and social exclusion from groups in Bharatpur:

“Others have groups, we have a problem with daily needs. Our everyday worry is poverty. We only have one meal a day, it is too difficult to make a group for us”.

The informal settlement dwellers are acutely aware of the necessity to be in a group in order to have a voice, to be visible thus being able to address a broader range of everyday risks. Simone (2004, 411) suggests, “Many residents, battered by the demands of maintaining the semblance of a safe domestic environment, find few incentives to exceed the bounds of personal survival”. Tenants explain they are keen to join community groups (TLOs and women’s groups) but are not allowed entry. Tenants have much narrower support mechanisms in place in the urban to address their perceived risks as was suggested in the last empirical chapter where tenants had

a different set of worries to those of homeowners. Through the TLOs, the new form of urban organisation and informal governance, large segments of the “urban population is denied the formal privileges of civil society” (Ghertner 2011, 505). There are few mechanisms through which the landless, tenants and informal settlement dwellers in the city, can make their voices, needs, perceptions of everyday risks and aspirations heard by the elite in the city. The strategies of the urban excluded in terms of urban resilience and or reworking are significantly curtailed compared to members of TLOs and women’s groups.

The respondents (tenants and informal settlers) lament their inability to join a group and to have access to collective power. In their view, their everyday worries are centered on basic needs; they could not focus on a longer time frame and rework their situation. Residents who are excluded from these forms of informal governance are forced to rely on much narrower forms of networks and coping strategies in the everyday. They have fewer opportunities to engage with the local authority. They can be resilient only due to their own efforts and reworking the urban is out of their reach.

5.6 Conclusion

Through this chapter, the significant role informal groups play in addressing a range of everyday perceptions of risk in the rapidly urbanising city has been argued. The second research question (How do residents address their perceived risks) has been answered. The informal groups of we-ness are a strategy utilised by residents to address some perceived risks that require attention on a community level in the everyday. These collectives of informal governance, tole level organisations and women’s groups, play a critical role in infrastructure provision (financial, social, physical and environmental). These groups strive to mitigate against the risks they face in the everyday, to change the urban reality to suit their needs when feasible. The empirical evidence suggests both resilience and reworking (Katz, 2004) can be found in the rapidly urbanising and changing setting of Bharatpur. The women’s groups showcase forms of urban resilient infrastructure but are not allowed to rework the urban. In an atmosphere where local government provision is absent or organised according to factors such as caste, affluence and geographical location,

people are attempting to rework the urban through their collective efforts. The male dominated TLOs are enabling reworking of ethnic and caste boundaries on a local level but gender roles appear unchanged in the case study wards.

The community groups aspire for more than what they have in the everyday; they desire a link with local authority in order to create a better future. The government decides who is acknowledged as a form of community and the government manages the gray space of informality to suit its agenda rather than addressing the full range of risks as perceived by all respondents. If agendas overlap, as in the case of physical infrastructure provision and preferably in locations where high caste and affluent residents live in ward 11 rather than in the areas where less powerful residents reside in ward 4, the local authorities engage. The government prefers to engage with TLOs but is ambivalent towards women's groups rendering them and their perceptions of everyday risk (including social infrastructure and environmental infrastructure) invisible. Those not in community groups such as the landless are also excluded from dialogue or linkages with the local authority and are not allowed to rework the urban to their benefit. The next empirical chapter explores research question three, "how do residents perceive the changing urban risk environment when events occur"?

Chapter 6 Events and a changing urban risk environment

6.1 Changing perceptions of risk

In the course of everyday life, it is difficult for residents to address not only their own economic insecurity but also environmental disaster, political instability and conflict in their surroundings. All of this occurs at different scales with an impact on individual lives in the urban. Chapter 4 presented the range of everyday risk perceptions of urban residents in Bharatpur. This ranged from worries impacting the respondents and their families such as employment, health, and education for children to perceived risks in the city such as environmental pollution and lack of physical infrastructure. Natural hazards were not considered a significant worry according to key respondents in this intra-urban comparison. Chapter 5 argued community groups including women's groups and tole level organisations (male dominated neighbourhood groups) are forms of either resilient infrastructure or are reworking the urban to address a range of perceived everyday risks. The local authority informally manages interaction with these collectives, communicating with the TLOs and only tacitly acknowledging women's groups. In this empirical chapter, research question three is answered, "How do residents perceive the urban risk environment when events occur"? Johnson et al (2010, 45) argue that the "risk we are experiencing in cities both today and in the future are produced over time, through the economic processes of urban development and various decisions taken at different times by the authorities and the citizens". The nature of contemporary risks in Bharatpur is highly complex and interrelated on many scales. As Cannon et al (2014, 13) note, "risk is itself culturally – defined", the risks people perceive as important in relation to these events are interrogated in this chapter.

6.2 Events

Two events occur which are of significance to respondents in this intra-urban comparison. The first event is the change of local government status from a municipality to a sub metropolitan city. The second event is the 2015 Gorkha earthquake whose epicenter was 38 miles north of Bharatpur. In this research, the

concept of events is defined as occurrences that are “extraordinary, punctuating” and which “throw lives out of kilter” (Rigg 2007, 17). Events as occurrences (Ibid):

“may be atypical but understanding their impacts and effects requires that the events are embedded in everyday geographies which, perhaps only for a short time, become particular day geographies”.

Birkland (1997) uses the phrase ‘focusing events’ to signify occurrences which by their sudden, unpredictable nature (earthquakes, hurricanes, oil spills and nuclear power plant accidents) can influence public policy-making processes. These focusing events make themselves known to the public and to policy makers simultaneously. By utilising the word ‘focusing’ Birkland highlights that only some events are deemed worthy of agenda setting, and engagement with public policy. This research shows that there are other ‘focusing events’ for residents, events that warrant attention and consideration, not only a high profile occurrence such as an earthquake. Lastly, events cause people to respond affectively (Heise, 1979). People attempt to make sense of the event, to accommodate it. If the event produces undue strain, people attempt to anticipate subsequent developments and to formulate a course of action (Ibid).

6.2.1 Events in Bharatpur

The urban landscape is rapidly changing, not only on an individual, household and community level in the everyday but also on other temporal and spatial scales. The empirical work allows for risk perceptions to be further explored on these other scales. This is achieved by utilising the two core sites of data collection and lastly, Mangalpur (a village amalgamated into the Sub-Metropolitan City of Bharatpur) as a new addition of analysis. I analyse how two events that occurred during the fieldwork impact upon risk perception in the city. Some events shape people’s views in the everyday, their ability to manoeuvre (Wood, 2004) and respond more than others. Watson and Kellett (2016) use the slightly different language of stresses and shocks to convey the relevance of including not only environmental occurrences (drought, flood, earthquake, tsunami, hurricane or cyclone) in the range of risks, but to consider health shocks, conflict and economic shocks. In other words, everyday risks as well as events that are not exclusively natural hazards.

Pidgeon et al (1992, 89) argue “the perception of risk is multidimensional, with a particular hazard meaning different things to different people (depending, for example, upon their underlying value systems) and different things in different contexts”. This social constructionist understanding of risk perception argues that from the perspective of residents in wards 4 and 11, both of these events are significant; they warrant consideration and understanding. Pidgeon et al (Ibid) also highlight an important component for risk perceptions are not only the judgements based on the characteristics of the activity “but also social and organizations factors such as the credibility and trustworthiness of risk management and regulatory institutions”. This is particularly relevant in this discussion of a changing urban risk environment that is being created by these two events. In both events, the “risk management and regulatory institutions” (Ibid) is central to risk perceptions, the local authority in Bharatpur. Table 6.1 below highlights the changes in risk perceptions of residents in Bharatpur due to these two events and their relationship to the local authorities. Residents and groups in the case study wards as well as the villagers of Mangalpur (amalgamated into Bharatpur) have been impacted by the two events in different ways.

Event	Perceived risk and relationship to the local authority
Sub metropolitan city status	Indigenous population and other low-income residents in ward 11 and residents in rural Mangalpur worry about the economic burden of anticipated tax increases.
	Expected reallocation of local government resources for physical infrastructure (paved roads) from municipal wards (1-14) to the new amalgamated rural wards (15-29). Some male residents from wards 4 and 11 worry their TLO's influence may be diminished due to the expected increasing influence of the amalgamated wards. Their ability to rework the urban may be diminished in the future.
Gorkha Earthquake	No change in risk perception of earthquake hazard for most respondents in wards 4 and 11 as well as for other research informants.
	Inability of less influential residents in wards 4 and 11 to procure structural assessments post-earthquake. This has resulted in fear that their homes are unsafe.
	Increased emphasis by national and local government to implement earthquake resistant procedures. This will impact new residential construction in terms of processes and cost especially in ward 11 where there is significant new construction.
Sub metropolitan city status and Earthquake combined	Additional burden of urban planning such as requirements for roads to be a certain width with additional space on either side of the road (setback) may decrease informal options available to TLOs in dense urban wards (i.e. ward 4) to pave roads and introduce other desired physical infrastructure such as drainage pipes. Informal reworking of the urban may be diminished in the future.
	Mangalpur ward official and residents are concerned with the necessity to conform to the national building code and earthquake safe construction laws for urban areas thus increasing cost of house construction for rural poor constituency.
	Residents of ward 11 and Mangalpur may not be able to sell agricultural land for residential construction thus losing potential income.

Table 6.1: Change in respondents' perceptions of risk

These two events showcase perceptions related to the possibility of economic stress, diminishing social and political influence as well as the likelihood of reinforcing

everyday marginalisation of low-income residents and exclusion from accessing local government services for socially marginalised residents in ward 11 and residents in rural Mangalpur. The earthquake does not change people's risk hierarchy but does reinforce everyday marginalisation for some residents. The earthquake also resulted in possible financial risk for some residents and for other groups the need to rework responses to urban risk is argued. Lastly, accumulation of risk through economic stress, the changing form of risk governance and the need to rework responses to local government is argued.

In this environment post earthquake, there is uncertainty on the part of the local government as to how it will implement the urban planning and national building code. Residents are also uncertain as to what extent the environment will change and to what extent their responses will need to change. This reflects the tensions emerging in the changing urban risk environment. The importance of local government to residents in relation to their possible accumulation of risk or their necessity to consider how to rework their informal collective strategies is considered. The everyday forms of reworking (in the form of neighbourhood groups) are insufficient to address (to cope or resolve) these infrequent events occurring on different scales. These informal groups do not have sufficient power to make changes in the city due to the events and need the government to engage with them. Therefore, these emerging forms of risk due to these two events from the perspective of the residents interviewed, force urban residents, especially low-income residents, to consider how to reconfigure their coping strategies in the city. For those who have been able to rework the city until now they are struggling to understand to what extent their reworking strategies to access physical infrastructure may change in the future.

6.3 Change of local government status

The first event to occur is the change of local government status from a municipality to a sub metropolitan city. Bharatpur has dramatically changed both demographically and physically during the three fieldwork trips over a 12-month period. Until November 2014, Bharatpur Municipality had 14 wards and a population of 144,000. In December 2014, Bharatpur was declared by the central

government (unbeknownst to municipal staff if and when this change would occur) as a sub-metropolitan city. This change of local government status did not result from a consultative process with the residents – neither in Bharatpur nor in the villages that were amalgamated. Local politicians from the villages, together with politicians from Bharatpur and the leader of the municipality of Bharatpur, made the decision to create the Sub Metropolitan City of Bharatpur (SMCB). The new administrative structure was approved by MoFALD. The SMCB has 29 wards, its physical area increased by 50% and its population increased over 50% due to five amalgamated villages in the southeast and southwest of the city. Douglas (1990) suggests that at times, risk and danger can signify the same to people. In the context of Bharatpur and the change of administrative status, some people perceive a danger. This danger may or may not happen but they worry. The uncertainty whether the perceived risk or worry will happen is stressful based on the views of several informants.

6.3.1 Sub Metropolitan City of Bharatpur impacts risk perception of the city

Villages, such as Mangalpur, bring their rural poverty, specific hazards and risks (river flooding and wild animal attacks) to the newly created SMCB. For example, Mangalpur, as a Village Development Committee, had 20,000 inhabitants and four wards. Most of the young adult male population work in the Middle East. They remit income to their families to be used for daily existence and not for long term investment needs such as construction of housing. Housing is primarily in the form of single storied mud huts. Flooding from the river is a significant concern for the poorer residents and informal settlement dwellers residing on the riverbank (Figure 3.7) as well as for the

(administrative governing body for rural areas). Mangalpur's recent experience of flooding (in the past five years) and the subsequent donor project to address flooding is guiding residents to learn how to address a range of issues related to flooding (response and long term mitigation). The socio-economic and environmental issues in Mangalpur differ from wards 4 and 11. Before the change in status from VDC to ward of the SMCB, Mangalpur residents stated they did not want to become wards

of Bharatpur. After becoming a ward, the residents and ward representative are pleased that they are in the “city” now and hope for physical infrastructure to be brought to their locality. Even so, they fear not only that local taxes will increase but also they do not want to conform to the national building code for urban areas that will be imposed upon them. Residents located near to the river explain that they are too poor to conform to city laws and ways of governing. The ward representative also expects increases in taxes to be enacted shortly in the SMCB.

According to the new leader of the recently created SMCB, there are five important challenges facing the SMCB (post-earthquake in 2015). These include: Urbanisation, solid waste management, introduction of street lighting, formalising informal businesses to increase the local authorities’ tax base, and lastly, implementing the national building code. Urbanisation is considered the most important challenge because “cities are no longer just upper middle class places, now cities have lower middle classes and renters as well”, in the view of the chief executive officer (CEO). This view of the city as a home for the upper middle classes warrants reflection. The SMCB CEO (who is the central government representative in Bharatpur) has aspirational views of the city. In Nepal, the cities have drawn rural populations for their good quality facilities (as was mentioned by Narayan in Chapter 4). The CEO does not currently engage with the poor or more vulnerable whose views will differ from his own (as mentioned by Shankar and Laxmi in Chapter 4).

Dodman et al (2013, 21) argue, “populations within these smaller urban centers [urban areas with fewer than 500,000 inhabitants] are likely to face much higher extensive risks. This is due to often weaker municipal authorities, poorer provision of services and infrastructure and lack of technical knowledge”. They suggest the relationship between the local authority and residents is essential to explore. Regarding how to manage urban risk, they argue (Ibid, 14) that “risks are generally much lower in cities in which protective infrastructure has been developed over long periods of time, and in which there are competent, accountable, adequately resourced municipal governments that work well with their low-income population”. Based on the views of the CEO, he has not considered the risk perceptions of the poorer

residents and those who are tenants in the SMCB. This may become an issue in his rapidly urbanising and changing city. The mandatory financial allocation from the central government to the local authority is fixed so the CEO must mobilise financial resources locally to address his perceived challenges in Bharatpur. Formalising informal businesses is essential for the leader of the SMCB. This is due to the fact that the current locally generated tax income of Bharatpur is 50 per cent lower compared to a similarly sized SMCB in Nepal with a comparable social and economic profile according to the CEO. He needs to “mobilise resources” [taxes] from as many sources as possible to address the expanding challenges he sees in Bharatpur.

Long-term residents from Bharatpur complain about the new sub metropolitan status. In ward 11, the indigenous key informants (mentioned in Chapters Four and Five) express their concern about the SMCB status. Shankar (who has worked in Malaysia) suggests the status of SMCB should not apply to where he lives in ward 11:

“The facilities here are not that of a sub metropolitan city. There are no rules and regulations in Nepal. Bharatpur has no proper drainage, sewage system is non-existent, no [urban] planning, the politicians are just increasing [geographical] borders”.

The leader of the Kumal indigenous group, supporting Shankar’s view, explains that he does not feel life in ward 11 is comparable to living in a sub metropolitan city:

“I think it [ward 11] is a village because when I think of a city, I think of facilities, government offices, industries, service facilities but compared to Bharatpur, we do not have this extended road network, electricity and facilities”.

The Kumal leader continues by saying that the only noticeable positive change is regular rubbish collection. Other respondents in ward 11 are hopeful there will be positive changes for their ward after the declaration of SMCB but they have not seen any changes in the nine months. In ward 4, the hotel owner who had lived in the European Union and Hari Prasad regard the change to a sub metropolitan city status with scepticism. In their opinions, the primary beneficiaries will be the politicians and land owners. Land prices are increasing significantly in all parts of the sub

metropolitan city. For example in ward 4, the price of land in the Citizens Village Tole increased over 100 per cent during the 12-month period of fieldwork.

6.3.2 Risk accumulates through economic stress and diminishing influence

The change from municipal status to a sub metropolitan city is changing perception of risk associated with economic security for some respondents in wards 4 and 11 as well as in Mangalpur. Indigenous low-income residents critique the new sub metropolitan status and the anticipated increase in taxation. For example, in ward 11, the leader of the Kumal indigenous population explains that he fears for the long-term security of his community that survives on subsistence living. In the leader's view, the SMCB will demand taxes from residents, to pay for the mostly invisible services of the government. The leader believes this will result in more vulnerable members of the Kumal community being forced to sell their land and resettle out of Bharatpur where land is less expensive. He fears this action will destroy the long-standing social fabric of the indigenous Kumal community. The Kumal community's perception of risk is based on the present or the short term (Douglas and Wildavsky, 1982). They do not question whether there will be any additional service provision from the local authorities (they do not expect any). Rather they expect a cost, an additional risk, in the form of taxation that they do not have the finances to pay. Those who are particularly vulnerable in Bharatpur (respondents such as the indigenous population as well as other low income residents in wards 4 and 11) do not have the resources to cope with this perceived economic risk. Thus they worry about "their ability to deal with a crisis when it strikes" (Kanbur et al 2001, 135). Their everyday worry of economic security from Chapter Four continues, is exacerbated when an event such as the change in local authority status occurs. Risk accumulates for the poor.

Based on risk perceived by key respondents in ward 11 and Mangalpur, the change from municipal status to SMCB is creating the perception that economic risk will increase in the form of taxes. This is particularly impacting adversely on poorer residents. The perception of risk in relation to the SMCB is partly the expectation of existing economic risks being exacerbated. The poor who view their economic situation as the main risk in the everyday also worry about finances through this

event. Also, according to many respondents (municipal representatives, respondents in wards 4 and 11 as well as the ward secretary in wards 15-19) the SMCB is expected to divert financial resources for physical infrastructure. The diversion will be from existing municipal wards to the new rural outposts of the SMCB, negatively impacting both wards 4 and 11. These residents in wards 4 and 11 who are in neighbourhood groups perceive a tangible risk in not receiving physical infrastructure (such as paved roads or drainage pipes) they have been lobbying for. They worry they will have less negotiating power in the future; to the benefit of the rural areas of the former Village Development Committees.

The SMCB status is changing the relationship between the local government and different groups of people in the sub metropolitan city, as well as impacting upon the relationship between various parts of the city to each other. Historically, ward 4 and parts of ward 11 (where the indigenous and ethnic groups live) have not had much influence with the local government. In ward 4, key informants and their TLOs, worry about the changing sub metropolitan landscape and anticipate increased difficulty in influencing the local government to bring physical infrastructure to ward 4. They fear the amalgamated rural wards will receive infrastructure in the form of paved roads and the focus on natural hazards such as floods will be emphasised in the new wards south of ward 4. This may detract from the physical infrastructural needs of ward 4: unpaved roads and poor municipal solid waste management. Socially and politically, ward 4 residents did not possess the political connections required to bring positive change to their ward and now the TLOs worry it may be even more difficult to engage with the local authority. In the future, their influence may continue to erode as a consequence of the change in government status. It is anticipated that the SMCB will prioritise the infrastructure obligations of the politicians of the new 15 wards that have been created on the basis of the five amalgamated villages. The politicians from the rural areas who supported the amalgamation will receive infrastructure for their communities according to a government official in Mangalpur and other local government officials interviewed. This may lead to the core urban area and the 'village in ward 11' continues to wait for physical infrastructure. In the future, tensions between various parts of the city

may arise due to conflict over allocation of financial resources according to multiple informants. Risk accumulates for key informants in wards 4 and 11.

Dombrowsky (1998, 20) suggests “we see what we want to see” in relation to risks. The change in spatial and demographic boundaries of local government is a risk in the perception of SMCB inhabitants interviewed who are less socially / politically connected. This event is creating an atmosphere full of tensions (Heise, 1979) and resolution is unclear for the respondents in wards 4 and 11 as well as in Mangalpur. The change in local authority status from a municipality to a sub metropolitan city is impacting upon risk perceptions of the city. Through the impressions of the CEO, the indigenous group leaders in ward 11, respondents in ward 4 and lastly, representatives from Mangalpur, risk perceptions focus on how a city is envisioned, economic issues and conformity to laws. It is an event they cannot control but which may bring significant economic repercussions, potential delays in infrastructure provision and decreasing TLO influence on infrastructural decision-making. Events that have the potential to impact people’s lives in the present are highly problematic and register as a high risk (Wood, 2004). The poorer key respondents (Kumal informants from ward 11) and the rural residents in Mangalpur are particularly worried about increased taxes after the SMCB was created. Pelling (2003, 164) questions: “Why should the vulnerable, many of whom have to expend their resources, time and energy just getting by, be expected to plan for future uncertainties and risk? For many individuals and households this is a non-question – they simply cannot”. Those urban dwellers that already struggle in the everyday perceive new risks in the change in local government status. They worry about increased invisibility to the local government. The urban will change and they will need to find ways to adjust to the new environment. Through this event, risk is reinterpreted and accumulates for poorer and less influential residents.

6.4 The Gorkha Earthquake

The second event impacting urban risk perceptions was not governmental / political but a natural hazard occurrence, an earthquake. The 7.8 magnitude Gorkha earthquake, which struck Nepal on 25 April 2015, caused devastating damage to Nepal in deaths, injury as well as damage to homes and infrastructure (8,856 people

died, 22,309 people were injured, over 600,000 homes were destroyed and an additional almost 300,000 homes were damaged (GoN, Ministry of Home Affairs et al, 2015). Critical infrastructure such as school buildings and health facilities were destroyed or damaged as well. Figure 6.1 below shows the epicenters of the 25th April earthquake and the intensity of the shaking. Bharatpur (labelled as Chitwan below) experienced strong intensity.

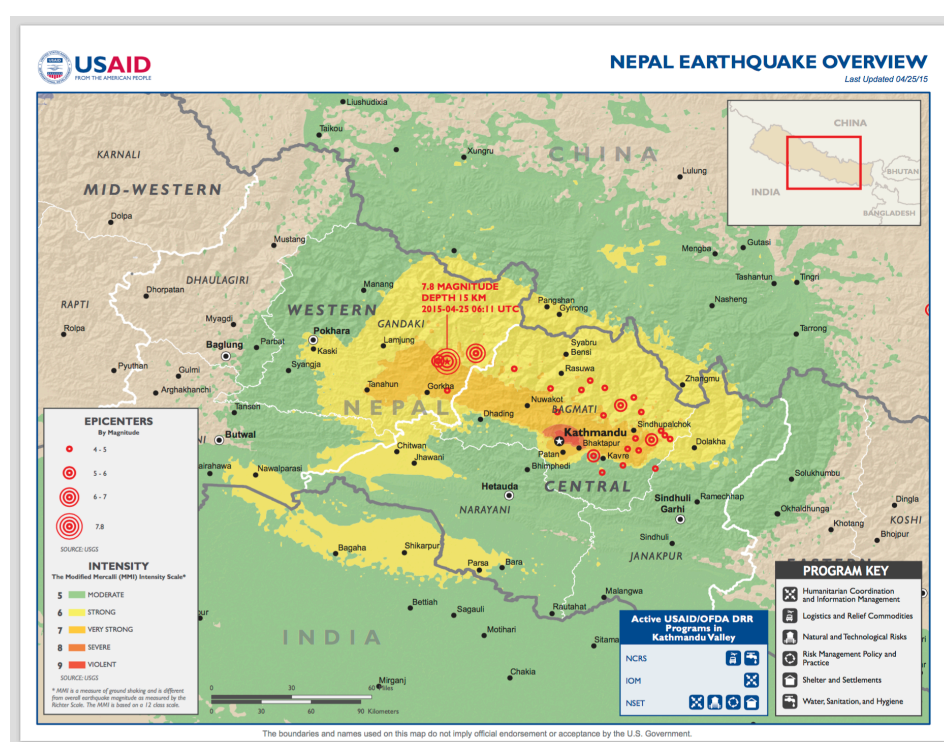


Figure 6.1: Epicenters and intensity of 25th April 2015 Earthquake (Source: USAID, 2015)

This devastating earthquake is not the “big one” feared by scientists (Hand, 2015) and the Government of Nepal. According to estimations of the Government of Nepal (GoN, Ministry of Home Affairs, 2011), if a 7.0 magnitude earthquake hit Kathmandu Valley, it could kill an estimated 40,000 people, severely injure 100,000 and displace 1 million people. An earthquake of this magnitude also has the potential to damage up to 60 percent of homes beyond repair and to seriously damage 95% of water pipes (Ibid). The Gorkha earthquake of 2015 was not the

earthquake that was feared although 1,741 people died in Kathmandu Valley (GofN, Ministry of Home Affairs, 2015), the main urban area impacted by the Gorkha earthquake. Scientists expected the size and location of the 2015 earthquake but the subsequent damage was lower than expected. The direction of seismic wave propagation, the underlying sedimentary soils and the ground shaking motion did not result in devastating destruction to the main building stock in Kathmandu (Hand, 2015).

Bharatpur's physical infrastructure had minimal damage from the April earthquake. Within five days after the earthquake, 100,000 people transited through the city on their travels from Kathmandu Valley to safety with family in the Terai. The local authorities supplied food and water to the travellers according to the SMBC. In contrast to the April 25th earthquake, the May 12th earthquake caused damage in Bharatpur: 100 buildings were destroyed and 300 buildings partially collapsed according to the SMCB. 143 people were injured and school buildings were damaged (GofN Ministry of Home Affairs, 2015). The SMCB staff struggled with the volume of requests for earthquake damage assessment. The SMCB trained 38 volunteer engineer consultants who assessed 3,000 reportedly damaged buildings out of a building stock of 40,000. It is unclear what the selection procedures were to choose whose homes would be assessed for damage. By September, the assessments were complete according to the SMCB.

6.4.1 Risk hierarchy and the earthquake

In the view of international disaster risk reduction experts, earthquakes are an infrequent but highly dangerous hazard event for Nepal, and are viewed as particularly risky. For example, the UNDP ranks Nepal as one of the world's hotspots for disasters (2004). Also, the *Geography of poverty, disasters and climate extremes in 2030* ODI report (Shepherd et al 2013, ix) suggests Nepal and ten other countries will have "high numbers of people in poverty, high multi-hazard⁷ exposure and inadequate capacity to minimize the impacts". They suggest long-term effort needs to be made to protect livelihoods. However, an on-going difficulty lies in

⁷ Earthquakes, cyclones, droughts, extreme heat and floods

understanding the role of natural hazards “in shaping the multiple and changing risks to communities and livelihoods” (White et al 2004, 23).

Most residents in Bharatpur interviewed as part of this research do not share the view of experts. They do not regard earthquakes, as particularly risky, even after the earthquake sequence of 2015. The way in which “people’s culture contrasts with DRR rationalities is most evident when people give a lower priority” than outsiders, including international experts, to hazards (such as earthquakes) (Cannon et al 2014, 24). “This may be partly because people consider that they have minimal ability to do much about those risks” (Ibid) and they prefer to focus on what they can try to influence. Lavigne et al (2008) argue that residents in high-risk zones are aware of the hazards but it does not influence their perception of risk. Cannon (2014b, 67) suggests people “apply much higher significance to problems of everyday life and issues that they have to confront for normal survival, most of which are linked to their livelihoods”. This is also supported by Lavigne et al (2008), Barberi et al (2008) and Wisner et al (2004).

First hand experience of the earthquake did not directly change people’s perception of risk (Cannon et al, 2014) nor how they expected to prepare for an earthquake and how to respond during an earthquake in the future. In the days and months after the earthquake of April 2015, many key informants in wards 4 and 11 continued to explain, “Chitwan district is safe, and Bharatpur is safe”. Krasovskaia et al (2001) found similar perception of risk in Norway after the 1995 extreme flooding. People who were not significantly negatively impacted (their homes were not flooded) in the extreme event did not view the hazard as particularly dangerous for the future; they felt safe. They may expect the future to be similar to the past in which the impact was not severe. Direct experience of the earthquake has not resulted in a change of risk hierarchy for key informants in Bharatpur and for the local government according to this research. This may be due to the limited direct impact the earthquake had on Bharatpur.

In the opinion of most key informants in both wards of comparison, they have been educated by a variety of methods (including weekly local radio programmes,

newspapers, training programmes in their work place) how to react during an earthquake (“duck, cover and hold”, accessing open space and sleeping outdoors for several nights). They explain that there is not much more to do to be prepared. The earthquake struck, they knew how to respond and then they moved on with their lives. “Can we know the risks we face?” question Douglas and Wildavsky (1982, 1). They argue that people decide which risks to face and which to ignore. According to the key informants, they could not do more to address this particular infrequent high magnitude hazard and the accompanying risks. The earthquake receded as a perceived risk for them that demanded attention and management; everyday life took precedence. The earthquake experience has been considered and ranked (similar to Cannon’s risk hierarchy in Chapter 4). An earthquake is beyond the control of key informants. The fact that the damage caused by the earthquake was minimal is likely to have played a significant role in their interpretation of the earthquake. People have analysed it, rationalised it, and ranked the earthquake in a hierarchy of risks (both personal and for the city as well as hazards). This infrequent but dangerous natural hazard is not the main worry in their lives; other everyday risks and hazards are more important. This discussion highlights the range of risks and hazards mentioned by respondents as well as local stakeholders of the city. Utilising Douglas and Wildavsky’s (1982) view of risk perception, people select certain risks and hazards to consider and not all of them are equally important to the respondents and stakeholders. Often their perceptions will not be similar to the views of experts as well.

6.4.2 The Gorkha Earthquake reinforces everyday marginalisation

The earthquake sequence raises an issue focusing on the relationship between local government and some residents. This earthquake sequence highlights a perceived risk for some less influential residents. After the May earthquake, based on guidelines articulated by the local authorities, residents formally requested support from the SMCB to assess the structural integrity of their homes. Undoubtedly, the local government’s resources were stretched and they tried to do the best they were able to in the circumstances. The local government responded but not to all residents. The following example is from ward 11. The Lama TLO management wrote a memo to the local government asking for an assessment of earthquake-

induced structural damage to several homes. The ethnic and indigenous neighbourhood group was unable to access this local authority's service. The president of the TLO with great emotion stated:

“The municipality probably threw it [their memo requesting assessment of cracks in buildings post-earthquake] away in the rubbish basket”.

They were scared, disappointed and angry that the government did not respond to their memo. This community group, normally very self-sufficient, has minimal expectations of the government in the everyday. In this extreme instance, they approached the government for a service they were unable to provide for themselves and the government ignored them. The ethnic and indigenous neighbourhood in ward 11 followed the procedures established by the SMCB and did not receive any government service. The Lama Tole representatives did not travel to the local government to query the status of their request. Subsequently, these homeowners have a new perceived risk to address and they do not know how to resolve it. People continue to live in fear that their homes are not safe.

In ward 4, the high caste president of the New Road neighbourhood group explained that after his written request to assess the structural integrity of his house went unheeded by the SMCB; he went to the local government and started to rant, thus succeeding in getting the government to come to his home to assess damage. These two examples highlight how different groups in the city responded to government's perceived inaction. The ethnic and indigenous neighbourhood in ward 11 followed the procedures established by the SMCB and did not receive any government service and were reluctant to physically confront the local government at the SMCB's premises. The upper caste man in ward 4 who historically has not benefitted from government services knew that if he physically went and caused a stir at the SMCB he would receive action and he did.

This lack of attention from local government officials in the aftermath of the earthquake reinforces everyday marginalisation of some groups. The ethnic group and high caste but poor ward 4 residents were enraged by the government's post-earthquake response. The local government response, post-earthquake, is similar to the ways the government engages with its residents in the everyday. In an

environment with limited resources and limited capacity, the government supports those most similar to itself in terms of caste / income and ignores those who are poorer or from the ethnic and indigenous populations rendering them invisible to the local government (similar to Ghertner's findings in Delhi, 2011). Through this infrequent event, risk accumulates for less socially / politically connected urban residents. In her discussion about vulnerability approach and marginalisation of certain groups, Varley states risk "is distributed unequally across different social groups" (1994a, 5) and political intervention is needed to reduce vulnerability of the poor. Often this does not occur and in this case, people's identity may be the cause of their invisibility; thus showcasing the need to consider the social and political aspects of hazard events.

6.5 What the earthquake allowed to happen

The anthropologist, Edward Simpson, in his book, *"Political Biography of an Earthquake: Aftermath and Amnesia in Gujarat, India"* (2013) describes how earthquakes are a special kind of a hazard that creates ruptures in physical, social, political and economic spheres where a new kind of a future can be imagined and created. He discovered that the 2001 Gujarat Earthquake radically changed Gujarat, India in the ensuing decade leading to the contentious "Gujarat model" for economic development. Likewise, the aftermath of the Gorkha earthquake is in the process of changing Nepal physically, politically, socially and economically. Simpson (Ibid, 11) argues that a large-scale event such as an earthquake is considered "as the disruption of the everyday, as exceptional and strange". But he argues, "fundamental change also takes place in the everyday of the commonplace... Change is not only top down, from the macro structures of state or nationalist history, but is also to be found in the small moments and actions of everyday life". I am attempting to understand the relationship between these events and how they impact upon the risk perception and understanding of everyday life from the perspective of respondents over time.

As part of the earthquake reconstruction process, the MoFALD declared it would strictly enforce the implementation of urban planning measures and the implementation of the national building code and earthquake safe construction

throughout the country. This is a positive policy decision that can have long-term impact in preparing the built environment for a future earthquake. After years of donor pressure to focus on disaster risk reduction in Nepal (Jones et al, 2016; Jones et al, 2014), the necessary central government political will to propel implementation of land use planning and earthquake resistant construction guidelines is present in the months after the earthquake. This momentum is a positive sign for Nepal. There is a window of opportunity (Birkmann et al, 2008) for improved practices related to earthquake resistant construction to be developed and implemented before collective institutional memory of the earthquake fades into the background. There appears to be an understanding in the national government that this earthquake was “not the big one” which had been expected and upon which disaster scenarios had been built. Fears that the next earthquake, whenever that will be, will lead to higher fatalities and more devastation than the Gorkha earthquake are reinforcing national efforts to focus on urban planning and building earthquake resistant infrastructure and houses in the future.

A complication to this evolving situation is the fact that municipalities report to the MoFALD (historically focused on rural Nepal) while responsibility for building code implementation and land use planning is assigned to the Department of Urban Development and Building Construction (Jones et al, 2016). How the relationships on a national level will influence local level activity is unclear. It is at the local government level and its relationship with residents, that the impact of the earthquake and what the earthquake allowed to take place can be seen and felt most intensively (Simpson, 2013). These changes will strengthen Bharatpur’s resilience to earthquakes long term. In the short and medium term, the combination of the change of local authority status and the earthquake create a perception of uncertainty. This perception of uncertainty and its relationship to risk perception not only for respondents but also for the local authority is reflected on in this section. Both the local authority and community groups’ space for informally influencing the urban landscape appears to be in the process of being curtailed. Women’s groups do not appear to be impacted by these two events in a direct manner and their forms of resilience are not impacted. Rather the neighbourhood groups who do more than provide resilience in the city are perceiving these events as risky. While curtailing or

eliminating informality may appear to be an appropriate goal on a national level, it is unclear to what extent this will happen and who will be impacted and in what way.

6.5.1 Local authority struggles with decentralisation and lack of resources

The earthquake propelled the central government to decentralise responsibility for disaster risk reduction (earthquake resistant construction) and development (land use planning) after the earthquake. The cascading impact of changes will be felt in Bharatpur and many other cities throughout Nepal, even those outside of the 14 designated earthquake impacted districts of Nepal. The central government took advantage of the earthquake event and introduced a policy of full implementation of urban planning and national building completion in early Autumn 2015 (pers comms MoFALD). Ofori (2008, 46-47) gives a brief description of urban planning, building regulations and codes in the global South. Building statutes are created and enforced to safeguard people and the community in his opinion. “Land-use planning regulations determine the location of items (zoning); the intensity of development (density); the heights of constructed items (massing); and the distances of the items from one another (setbacks)”. He continues by reminding the reader, “the prevention of disasters can be enhanced through the adoption and enforcement of more appropriate land-use planning and building codes”. Bharatpur, similar to other cities of the global South, is a site where urban planning generally follows the actions of people rather than dictating the development of the city; the reality is at odds with Ofori’s suggestions.

Disaster risk reduction is on the SMCB Leader’s list of five key challenges facing Bharatpur (albeit at the bottom) in the form of the building code. This most senior government official considers the starting point now for implementing earthquake resistant construction even though the local authority has been working with NSET and USAID for two years to implement the national building code and earthquake resistant construction. In his view, “if an earthquake occurs in 80 years from now, Bharatpur as a city will be prepared”. The earthquake sequence galvanised the MoFALD and the SMCB to continue its efforts to enforce building by- laws and the full implementation of the building code related to construction of new housing and commercial buildings. Before the earthquake, the local government was striving to

implement the national building code and training masons, building contractors, engineers and homeowners with the technical and financial support of NSET and USAID through the BCIPN project. After the earthquake, the SMCB's motivation was intensified due to pressure from the central government (MoFALD, and the Department of Urban Development and Building Construction within the Ministry of Urban Development).

Satterthwaite (2011, 1774) proposes that in many low and middle-income nations, cities develop: "Without any land-use plan or strategic planning framework to prevent sprawl and unnecessary loss of agricultural land... The expansion is determined by where different households, enterprises and public sector activities locate and build, legally or illegally. This also produces a patchwork of high- and low-density land uses that no longer have the advantages noted above for reducing infrastructure costs and resource use". He continues by suggesting governments should minimise loss of agricultural land to urban expansion. This has social ramifications "as a government policy that restricts the conversion of land from agricultural to non-agricultural uses around a growing city will push up land and house prices and often reduce still further the proportion of households that can afford a legal housing plot with infrastructure" (Ibid). A senior Bharatpur municipal official discusses the difficulties attached to urban planning and land use planning. The municipality (before it became a sub metropolitan city) is in a quandary he explains, "it has its hands tied". This is due to increasing levels of responsibility with insufficient political, financial and technical resources to implement all that is expected of it. He continued by saying, "people purchase agricultural land and build homes and subsequently receive planning permission from the municipality".

A SMCB official leading urban planning for the sub metropolitan city, echoing his colleague's earlier comments, explains after the earthquake:

"Now that we have 29 wards, it is more complicated, the area of the SMC is too big. In the near future, there will be a SMC master plan with a land use plan. At the present time there is no demarcation of land use. People will be angry that agricultural land cannot be residential. It is all easy on paper but in the "field" [in reality] it is difficult to implement [for the local government]".

The senior official's comments resonate with the findings of the World Disaster Report 2010. In this report, Hardoy et al (2010, 142) suggest that in almost all cities located in low-income countries, urban expansion is haphazard, led by households, enterprises and public sector activities both legal and illegal. "There is no plan to guide this process or if there is, it is ignored". Furthermore, limitations of the local government and of local governance have significant influence on the level of risk the residents face (Ibid). The World Bank (Hallegatte et al 2017, 113) state, "in most of the world today, risk-sensitive land-use plans face strong political economy obstacles and are only rarely enforced. One of the main obstacles is the asymmetry between the costs and benefits of risk-sensitive land-use planning". Until now, Bharatpur has not implemented its land use plan. The informality of the local authority has allowed a range of actors (politicians, property developers, neighbourhood groups) to influence the city's development rather than a land use plan.

In other parts of Nepal, Jones et al (2013) also found weak capacity and limited funding for disaster risk management at the local level. "Decentralisation of responsibilities without increased access to financial resources at local level has grave limitations" (Christoplos 2003, 104). The role of local government in creating an urban built environment that is disaster resilient faces challenges such as inadequate financial and human resources, need for pre-disaster land use planning and regulation of land use (Malalgoda et al, 2013; International Federation of Red Cross and Red Crescent Societies, 2013). The central government may be decentralising responsibility to local level without appropriate resources. Pelling (2012, 147) suggests disasters can weaken local government "even further as their functions are overwhelmed". The local government is acutely aware of its visible role to the residents as well as how it will be held to account to the central government in relation to urban planning and earthquake resistant construction even though the local government is struggling with insufficient human and financial resources (Ibid).

My point is that the earthquake allowed the central government to take "ideas that have been lying around" utilising Hyndman's (2011) phrase in relation to the 2004

Indian Ocean tsunami. Both events impact the local authority and how it perceives and manages urban risk. The government took hold of two ideas (earthquake safe construction and urban planning) and propelled implementation albeit not ensuring the local authorities have the capacity and tools (including political will) to implement the land use plan and ERC. Central government did not increase the core budget allocation (primary source of funding for the SMCB). Ribot (2002) suggests that in the global South decentralisation of responsibilities from central government to local government may not be of benefit to residents unless financial resources and political accountability in the form of local elections are also part of decentralisation. There is a common misperception amongst key informants in wards 4 and 11 (as well as in Mangalpur) who assume there has been an increase in core funding from the central to the local government after Bharatpur became a sub metropolitan city.

International respondent #4 who works with donors and practitioners implementing community based disaster risk reduction projects discusses decentralisation efforts in Nepal and how the central government may not be empowering local government post earthquake. The informant explains:

“The way it works with the power structure, they [the central government] might try to decentralise some of the policies in term of implementation, and recognise they cannot implement it themselves but they have not decentralised the power structure [to the local level]. Because in Nepal, still there are no local government officials [they are representatives of the central government on a local level, there are no elected officials]. The power structures are still centralised. There is not much money floating around in Nepal; it is about power. The hierarchy of the society runs on power and networks”.

With limited financial resources available, the central government keeps control through other resources. On a local level, to what extent “funding, technical resources and trained staff local government units are able to [be] deploy[ed]” (O’Brien et al 2012, 631) in order to address risks associated with development and reduce disaster risk is problematic. White et al (2004, 29) suggest that “poorly planned attempts to reduce risk can make matters worse” post hazard event. It remains to be seen if the national requirement for housing construction to be earthquake safe without appropriate training and financial support for local governments will be implemented appropriately. For local governments “to be able

to make relevant and useable regulations, they need input and support from their communities” (International Federation of Red Cross and Red Crescent Societies 2013, 13). It is unclear when and to what extent the momentum may recede into informality and gray spaces (Yiftachel, 2009) of urban functioning in the long term due to possible difficulties (technical, administrative and political) in implementation.

6.5.2 TLOs need to learn new responses to perceived urban risk

In the introduction to the World Disaster Report (IFRC 2010, 9), Focus on Urban Risk, Bekele Geleta, the Secretary General of the IFRCRCS argues: “one man’s flood drain is another man’s home. This paradox – the elimination of one risk to replace it with another – must encourage us to engage intelligently with communities struggling to survive along the fault lines of urban risk”. This quote stimulates reflection about Bharatpur, minimising one risk only to replace it with a different set of risks. In Bharatpur this could mean minimising earthquake risk through the full enforcement of the national building code (NBC). This risk may be replaced with the possibility of a changed relationship in the everyday between the local government and communities. In this discussion, urban planning and physical infrastructure can be viewed as problematic terrain.

The SMCB’s mandated requirement to implement urban planning in the form of a land use plan that will govern space in the city is being viewed by many residents as a potential risk. Those who are already organising to influence local authority provision of infrastructure worry they will have fewer available mechanisms to informally influence the urban landscape. Until now, this has been accomplished in informal ways, in a gray space of maneuvering (Yiftachel, 2009) created and managed by the local authority. The informality of residents and local government, in relation to infrastructure investment (roads), has allowed the city to develop in the past decade in spite of the local government’s limited financial resources. In the recent past, as was shown in the previous chapter through the example of Lama Tole in ward 11, Bharatpur residents of different ethnic and caste groups, as well as residents of differing lengths of time in the city, residents who would normally not be expected to work together, have been coming together and crossing historical

lines of segregation in a fluid collaboration (Simone and Fauzan, 2012). This may be curtailed in the future.

In cities, “infrastructure and land development are used as instruments to compel, some might say extort, new urban institutional and social relations” (Simone 2008, 200). For example, the president of the Citizens Village Tole in ward 4 is particularly worried during my third visit, five months after the earthquake. Ram Prasad is concerned his TLO’s way of engaging with the ward and the local authority will soon need to change. The relationship has the distinct possibility of becoming more onerous and fraught with difficulties. The local authority has stated publicly at a large public construction sector event in September 2015 that it is now implementing the NBC “without flexibility” (in the words of the SMCB’s CEO) and simultaneously implementing urban planning with required eight-metre wide roads and three-metre setback from the road. In the dense mixed usage urban environment where Ram Prasad lives, the implementation of the mandated width of the road will be highly problematic. Private buildings (owned by absentee landlords) will need to be demolished if roads are to be the appropriate width. Infrastructure projects (additional paved roads and installation of drainage pipes for monsoon rains) may not be allowed to proceed in the future. Ram Prasad’s tole will require more direct municipal involvement. Based on the past, there is little likelihood the municipality will focus on ward 4 including their area. According to Hari Prasad, introduced in Chapter Four, “[the] rule of law is not strong. It is the biggest problem.” To what extent informality will disappear is uncertain and the TLOs perceive this as a risk. They will need to learn new response strategies to achieve their goals.

Heise (1979) argues events cause people to respond affectively; people need to not only make sense of the event but to accommodate it into their everyday lives. It is clear from respondents; the combination of events (EQ and SMCB) is causing strain. In this situation, respondents are attempting to anticipate subsequent developments from the local authority and are attempting to understand how to formulate a course of action. The TLOs want to continue to rework the urban for their benefit but are uncertain how and what course of action to formulate in response to the two events (Ibid).

It is unclear how the local authority will implement the central government's new emphasis on urban planning and NRC. Until now, this informal space has served a valuable purpose according to urban residents and the local government who needed co-financing to pave roads and bring modernity to the city. The residents learnt that by working together on a local level, they could bring infrastructure to their neighbourhood and become "modern" (a phrase respondents in wards 4 and 11 often utilised). The recently introduced administrative changes related to mandated urban planning will constrain the everyday forms by which the local government is able to work with the neighbourhood groups. These two events (SMCB status and the earthquake) jointly have created a perception of additional burden, uncertainty and perception of changing risk for most male informants interviewed (respondents in wards 4 and 11, in Mangalpur as well as in the local authority and local leaders). The combination of the two events will impact informal gray modes of functioning in the everyday of those who are in the ethnic or indigenous groups as well as the aspiring middle class who informally use their social and political connections to influence the development of the city.

While community mechanisms may help in everyday situations to address risk, Christoplos (2003, 102) suggests that these mechanisms may not be able to cope with "risks affecting broad sectors of the population". The local government will need to play a more visible role in the provision of infrastructure. A role historically it has not been willing and or able to undertake due to financial constraints among other constraints. It is here at the local level at the interface between local government and residents where the perceived urban risk will be defined, considered and possibly ignored. "The political costs of redirecting priorities from visible development projects to addressing abstract long-term threats [such as the earthquake] are great" (Ibid, 105) even if the abstract long-term threat is real as in this case. The local government will influence the formation of risk while residents will decide how risk will be perceived and if responses need to be reworked.

6.5.3 Earthquake resistant construction is a financial risk for Mangalpur's poorer residents

In this context of central government's renewed emphasis on urban planning and earthquake resistant construction, some residents also perceive new risks. After the earthquake, issues of urban planning in the sub metropolitan city and implementation of the national building code and earthquake safe construction became a sensitive issue amongst key stakeholders in wards 4 and 11 as well as in Mangalpur. Urban planning impacts all residents in some manner while earthquake resistant construction impacts a smaller group of residents, generally those who are constructing new homes. Under no circumstances am I proposing that implementation of the national building code should not be adhered to; it is the cornerstone to building earthquake resilient construction and communities (Wisner et al, 2012a; Bosher, 2008).

Instead, what is being suggested is the necessity to reflect on the perception of the additional burden, uncertainty and risk being placed upon people who do not have significant financial resources to build a home. They worry about how to fully adhere to the NBC and in what manner the NBC will be implemented in the new amalgamated rural wards. In her research based on risk perception and response in the disaster-prone city of Cochabamba, Bolivia, Sou (2014, 161) found that for residents "buildings codes are not easily accessible and are often difficult to comply with because of increased costs". O'Brien et al (2012, 631) suggest implementation of disaster risk reduction efforts such as the earthquake resistant construction "may lack full support by residents who feel excluded". For many residents of the new rural wards, the SMCB and the earthquake bring perceptions of economic risk. There was no consultation with residents from the village as to whether they wanted to be part of the city and thus to conform to the city's regulations. A shopkeeper in Mangalpur concisely explains:

"For poor people it will be a worry. New housing construction will be expensive. For the rich it [the change to a sub metropolitan city] will be good; they can earn more money [through selling land]".

During informal conversations with an official of the Mangalpur wards during two fieldwork trips (before and after the earthquake), he explains the impact of the change to a SMC and the earthquake has been mixed:

“The National Building Code will be implemented for an additional cost. People are poor here. It is not appropriate to compare Mangalpur with Bharatpur. Here in Mangalpur we have mud homes”.

Mangalpur will now need to implement the national building code. The president of the largest of the three associations of masons in Bharatpur explains that in urban areas, people are aware of the need for earthquake resistant construction and are willing to pay for it. In peri-urban and rural areas he believes the situation differs, “They have little money. They just want *a* house.” Delaying building a house in order to save the additional 10-15% needed for an earthquake resistant house in Nepal (according to interviews with the masons, municipality and NSET, this is the additional cost) is not an option. There are annual increases in costs associated with building a house (building materials and labour). Haynes et al (2008, 260) argue, “there is not necessarily a direct link between awareness [of a hazard], perceived risk and desired (by risk managers) preparations or behavioural responses”. These tensions cannot be resolved in the short term but being aware of them is relevant to the local authority when they attempt to implement the NBC.

6.5.4 Accumulation of urban risk

Contextualising natural hazard events as a risk among others in this urbanising setting where rapid change is occurring in different spaces and scales brings a new lens to Bharatpur. Hazard events and other events “should not be segregated from everyday living” (Wisner et al 2004, 4). They merge in the context of people’s “normal existence” (Ibid). The landscape is changing for both the local authority and the key respondents in both wards of comparison as well as in rural Mangalpur. These events are impacting not only the physical, natural landscape but also the social, economic, political and emotional landscape of Bharatpur’s residents. It is the changing relationship, between local government and residents that is essential for the discussion concerning accumulation of urban risk. It is unclear if the events will entail a “reorganising of visibilities” (Escobar 2012, 157). This will involve reorganising who is made visible to the government and on what terms visibility is

granted. These events show that those who are “at risk” (Wisner et al, 2004) in the everyday to economic hardship continue to perceive economic risks as the most important when an event occurs (for example the SMCB). Those residents who are socially / politically marginalised in the everyday continue to perceive similar risk when an event occurs on other scales, in this case the earthquake. Perception of everyday risk continues through different scales in which the two events occur. These events also show that people who not only accommodate everyday risk in their lives but who can rework the everyday context express their worry about the two events.

Who accumulates urban risk requires some reflection. Shepherd et al (2013) argue the combination of everyday individual shocks (such as illness, death, crop failure and environmental hazards i.e. flood, drought) as well as other large-scale shocks brings hardship and poverty to people. Shepherd et al also argue that people prioritise every day risks such as income and security rather than less frequent disasters. In the urban setting, risk is accumulated through engagement with everyday occurrences as well as through engagement with less frequently occurring hazards (Bull-Kamanga et al, 2003). Together they create an interconnected complex mixture leading to a difficult situation for the city’s inhabitants. Bull-Kamanga et al’s seminal paper (2003) suggests there is a relationship between disasters and an increase in risk from poorly managed urban development. They also propose there is a need to understand how local governments and community organisations identify and act on processes that cause the accumulation of risk in urban areas.

These two events in Bharatpur may lead to an exacerbation of existing risk for poorer, less connected urban inhabitants such as ethnic and indigenous residents. The events are introducing new risk to rural residents in Mangalpur who do not understand how the urban functions. This is in relation to the current urban forms of engagement in Bharatpur between local authorities and groups. This may lead to accumulation of urban risk in Bharatpur by those least able (socially and financially). The role of local government is important for the discussion of accumulation of urban risk. These two events highlight the need for multiple scales of government to work effectively together when an event occurs that is not part of the everyday.

These events also highlight the impact of different scales on the residents of the city and emerging anticipated difficulties due to government failings or expected changes.

The central government and its policies will be made visible through the actions of the SMCB. The city as a site for drastic reconfiguration or reorganisation of the governance system is occurring; requiring additional effort from residents to understand the changes, the forms of additional risk that will be required from residents to consider and negotiate. These events raise tensions, where the future pressure point will be between the local government and residents. The tensions that may arise will be particularly problematic in the dynamics of the city. These include spaces that have historically been ignored (ward 4), geographic areas that have only recently learnt how to engage with the government (ethnic groups and indigenous groups in ward 11), the rural residents in the new SMCB (Mangalpur VDC), and the influential groups (newcomer Brahmins in ward 11) who will need to accommodate the emerging sources of power from new rural wards (politicians). Pelling (2012, 148) proposes: “Risk accumulates in the degraded infrastructure, dysfunctional institutions, eroded natural capital and constrained livelihoods of those at risk. Everyday and small disasters add to risk burdens through the incremental erosion of capitals and opportunity costs of living with risk. However, these risk burdens are not evenly distributed, geographically or socially”. The burdens on the poor, Pelling continues (Ibid) are based on an interface of “local maldevelopment and the costs of development gains enjoyed elsewhere in the city”. Risk accumulates for poorer and less socially / politically connected ethnic and indigenous urban residents and for those in centrally located dense ward 4. Risk also accumulates for rural residents in Mangalpur wards.

The everyday in Bharatpur does not allow for some residents to have power and influence to influence the urban as was detailed in Chapter 5 (the landless – the renters and informal settlement dwellers). Segments of urban dwellers are already excluded from coping mechanisms organised in the form of community groups (women’s groups and tole level organisations) in the everyday. In the newly amalgamated villages, neighbourhood structures (TLOs) do not exist. The residents

do not have any mechanisms in place to informally influence the SMCB's decision making on infrastructure provision in the manner the urban wards have been utilising to varying degrees of success. It is unclear how the needs and voices of the rural residents will be articulated to the SMCB. Systems are not in place in the rural areas and existing urban informal options are being curtailed. The likelihood of these marginalised and excluded individuals accumulating risk from events is considered high. Those who are not in a position to organise and represent their interests and concerns to those who wield power are also accumulating urban risk. Changes in urban risk environment make additional people vulnerable. In the future, there may be many more residents in this situation of accumulating urban risk.

6.6 Conclusion

This chapter answered research question three (How do residents perceive the changing urban risk environment when events occur). Two events occurred during the fieldwork, the change of status from a municipality to a sub metropolitan city and the Gorkha earthquake. Rather than assuming the earthquake was the most important event, by acknowledging and considering the views of Bharaptur's residents, discussion surrounding changing urban risk can be moved to a new dimension. By centering discussion from the viewpoint of residents and what they perceive as risks to be managed, the change in local authority status is considered as a significant risk. New knowledge has been created about how respondents perceive risk and whose perception of risk is most impacted by these two events.

Findings show that the change to sub metropolitan city status changes risk perception of the city for the more vulnerable residents, the indigenous group in ward 11 who do not perceive their area to be part of a 'city'. The perception of risk accumulating through the expectation of taxes being increased is problematic for the poorer respondents. The SMCB status is also impacting on the risk perception of physical infrastructure. Residents fear that risk will accumulate through provision of physical infrastructure. Priority will be given to the new wards created under the SMCB. The Gorkha earthquake replicates everyday marginalisation of those who do not have the influence in the city based on caste to be able to access government services.

Together, the change in local authority status and the earthquake also introduce changes in risk perception of residents in wards 4 and 11 as well as in the former village of Mangalpur. These two events showcase the local authority's uncertainty regarding how to adapt to decentralisation and a renewed emphasis on urban planning. Residents consider how to incorporate these events into their lives through accumulating the risk and or changing their response to risk perception. Different residents perceive different risks through the combination of both events. Through the implementation of the land use plan, the joint maneuvering of the local authority and the TLOs will need to be changed. In wards 4 and 11, the TLOs struggle to understand how to adjust their informal reworking strategies in the urban through which they have accessed the provision of physical infrastructure. Financing earthquake resistant construction in Mangalpur is considered a risk for poorer residents. Both events matter to residents in Bharatpur. These events separately and in combination highlight the changing risk environment. These events also highlight the central role of local government in risk governance systems. In the last empirical chapter, research question four is answered related to how the IAC understands urban risk and resilience in Nepal and to what extent do these understandings reflect the everyday lives and needs of urban residents in Nepal.

Chapter 7 Resilience lens ignores risk perceptions

7.1 Resilience in Nepal

“I hate the word resilience. This might be a good place to start. It is framed always in an academic context, and I see myself as a practitioner. I am interested in what resilience means for the people we are working with. What is their definition of resilience and trying to marry the academic world and what communities feel. There seems to be a large gap in the literature between what we as practitioners or academics define as resilience and what people actually feel. For me resilience is the ability to survive and have a good life at the end of day. I think we could overly intellectualize it.

In CBDRR, I am trying to get away from [the] phrase of DRR and frame it in a safety perspective. How do we keep people safe? It is not the “D” [Disaster] at all, but risk reduction. There are many, many risks in Nepal. It can be the rhino attack in the field or the road traffic accidents. From what I have seen globally, it is those other elements of risk that are equally important to people at the end of the day. It [resilience] may or may not touch on disasters”.

This quote from Nepal IAC informant #3 (who coordinates community based disaster risk reduction activities between the INGOs and the Government of Nepal) clearly articulates the difficulties in operationalising the word resilience. This international informant suggests residents’ perceptions of everyday risks are missing in the discussion of disaster risk reduction and resilience in Nepal. Resilience has become “one of the leading ideas to deal with uncertainty and change in our times” as witnessed by policy discourses and academic debates on the concept (Hutter et al 2013, 1). Mitchell and Harris (2012) suggest that the concept has been appropriated by bilateral and multilateral donor organisations. This empirical chapter answers research question four, “How do international aid agencies understand urban risk and resilience in Nepal and to what extent do these understandings reflect the everyday lives and needs of urban residents”?.

During an interview with a senior MoFALD government official based in Kathmandu, he explains in English that when he discusses the concept of resilience he uses the Nepalese words *surachit* (safe) and *surachi samojay* (safe community). There is no Nepalese word for resilience. In his view, the phrases ‘safe’ and ‘safe communities’ allow for a nuanced understanding of risk. He explains that the phrase

‘safe communities’ also considers what helps to keep people safe in the everyday and in the future. This senior government official in MoFALD suggests the following definition of a disaster resilient community:

“The community is central. Government and other partners can improve their capacity to deal with a disaster. Government is a small part in the capacity of the community. Communities that have sufficient capacity to save their lives and property from disaster, we think if these communities have these capacity, these communities are resilient”.

This is a narrow interpretation of a disaster resilient community but it is the one the government uses. In this formulation, there is minimal consideration of scales, the role of government and other partners and lastly, the focus is on recouping losses. There is little consideration of the future. For several years, the IAC has been working with MoFALD to support community based disaster risk reduction initiatives and many of the projects are striving to develop disaster resilient communities through Flagship 4 of the Nepal Risk Reduction Consortium. This senior government official stresses that the community is at the centre for disaster resilience on a local level. The community needs to take care of itself and that government plays a small part of the capacity to help communities be safe. It is unclear in the discussion how the government official expects communities to help themselves and with whose resources.

7.2 How the international aid community utilises the resilience lens

These international actors (donors and INGOs) influence national and subsequently local government level discussions through their significant power and influence over governmental priorities in Nepal. Due to a large extent, this is due to their significant financial contribution to Nepal (Jones et al, 2016). Development assistance to Nepal from 40 donors amounts to \$1.04 billion (Oven and Rigg 2015, 697) and equates to 26% of Nepal’s national budget (GofN MoF, Nepal 2013). Berry and Gururani (2015, 6) propose donor interventions and state government: “interact with transnational imaginaries, contributing to the flow of meanings and shaping institutional spaces and practices... ‘developmentalizing’ is an inherently creative process that generates a multiplicity of forms, perspectives and approaches”.

Disaster risk reduction, resilience and earthquake risk reduction are high on the priorities of the IAC.

The IAC is powerful and its views hold sway over the government in relation to the concepts of disaster risk reduction (DRR) and resilience and how they are operationalised in Nepal. Jones et al (2016, 34) explain, “it is clear that the influence of international organisations in Nepal is very significant and that the donor community plays a large role in advancing the DRR agenda, especially earthquake risk reduction”. In Nepal, the IAC has supported the development of disaster management plans on a national, district and municipal or VDC level. The IAC is also working on CBDRR initiatives to develop disaster resilient communities. By utilising the lens of resilience, I argue resilience is being conceived and enacted by the IAC in two distinct ways: firstly, on a global level as a concept to bridge the gap between different disciplines such as development and disaster risk reduction and secondly, disaster resilience is a project management tool for the INGOs in Nepal. Through a series of interviews with donors, INGOs, Nepalese practitioners and representatives from the Government of Nepal, this analysis shows resilience is serving the needs of the international aid community. It is unclear to what extent the resilience framing utilised by the IAC is of benefit to Nepalese people and specifically residents in Bharatpur and their perceptions of risk.

7.2.1 Resilience as a bridging concept

The first way the IAC is using resilience is as a bridging mechanism between different sectors. As a senior official from a multi-lateral donor organisation based in the USA responsible for climate change, disasters and conflict explains:

“Resilience is definitely a buzzword in my opinion. But the buzz has been coming down over the past year [2014 - 2015]; it is a good thing, the idea behind it. It took root. A lot of organisations are working to embed it in the work they do, and trying to work *differently* [his stress]. So it [resilience] will stay. Maybe not in the way it was talked about two years ago [operationalising it] but as an approach in terms of the way we need to change the way we work”.

Resilience is a new way of thinking about issues and also a new way of collaborating within the IAC. Rather than talking about resilience in terms of the “theoretical

debate over what it is and what it is not” (in his words), his organisation is more interested in furthering discussions about integrating risk into all of their work: development, disaster risk reduction and in climate change adaptation. “Understanding that development needs to address risk drivers”. He continues by explaining:

“We, the development organisations, we do not have a common understanding of what resilience means. Implicitly, tacitly, we talk more about risk than we talk about resilience... We shy away from resilience. We talk about risk financing and risk informed development. We try to get development players together. Humanitarian needs and underlying development drivers that create more and more humanitarian crises”.

In the same meeting, his colleague working on disasters adds:

“In my view, it [resilience] is nothing new. It is a concept with a lot of history and there was a new take on it. But also, there is a need for the [international aid] community to come up every now and then with a new term to gather together [around]. There will be something else that will be pushed up in a few years, but it does not mean that resilience will not stay”.

These two donor officials suggest resilience is a mechanism through which various donors and INGOs from the international aid community can frame their work in a different manner. Resilience as a concept has been useful in both of their opinions; it is allowing donor partners to consider their work in a different manner but not lose sight of what matters for the organisation (in this particular case, risk). Resilience as a concept, provides an opportune framework for the international aid community to “work across silos” (Levine et al 2012, 1), discussing topics that have until now, not been discussed in unison. The donor official working on disaster issues explains that the concept of resilience “helped to get better interdisciplinary discussion going. There are now more diverse actors talking together in the same room” (including development, DRR and humanitarian actors). This is of benefit when discussing conflict, natural hazards, humanitarian assistance, climate change and development within the international aid community.

Resilience as a concept allows the international aid community to consider a holistic approach to development, disasters and climate change in Nepal. The international DRR expert (Nepal IAC #3) in Nepal whose comment introduced the chapter suggests:

“What I like about resilience, I see it more as integrated approaches... contributing to someone’s resilience. I try to move people [other international partners] away from DRR to broader root causes of why a person would be unsafe”.

Resilience in this informant’s view has the potential to allow the government and the IAC to address root causes of why a person would not be safe. Research on understanding urban community resilience to earthquakes in Kathmandu Valley (Ruszczuk, 2014) supports this view of a holistic approach to resilience. In my earlier research, I found that a holistic approach to resilience is needed in Nepal. This approach would focus on everyday needs, primarily livelihood protection or enhancement, economic stability or growth for the family, creating pathways that connect people and local authorities as well as enhancement of social structures (such as women’s groups and youth groups). Building on indigenous knowledge of hazards and response, focusing on individual and group capacity building and training in some DRR functions, financing of locally based DRR initiatives is essential. Lastly, enforcement of building code regulations concerning earthquake resistant buildings are also necessary to build community resilience to earthquakes from my 2014 research in Kathmandu Valley.

The resilience lens may be effectively bringing together “different disciplines to address problems of poverty, vulnerability and risk” (Levine 2014, 17) in the global humanitarian and development community. Levine et al (2012, 4) suggest the debates around resilience have created a rethinking of “the relationship between aid and crisis, and have helped the humanitarian, development and CCA communities to see their common goal [of supporting people and decreasing their vulnerabilities]”. Resilience is bridging development, disaster risk reduction, humanitarian and climate change discourses and creating a space where different perspectives can come together (Bene et al, 2013). It is a unifying concept that minimises dichotomous thinking and which spotlights linkages between the natural and social spheres (Rival, 2009). Levine et al argue (Ibid) resilience has helped to emphasise the need for sustainable development to take a dynamic perspective “and of the importance of risk management, a new DRR, focusing more on people than on physical infrastructure, and on all risks, not just natural disasters”.

The concept of resilience, although it is unwieldy and may appear even clunky, appears to be bringing about a small change in the way the international aid community functions in Nepal. Resilience appears to provide a mechanism for possible collaboration and holistic thinking for the IAC. The disconnect between resilience as a framing mechanism and implementation starts with the relationship between the IAC and the Government of Nepal. Resilience is of use to the national government to a more limited extent (through the emphasis on safety). A senior official of a Nepalese NGO comments on the drivers of DRR in Nepal:

“Who is leading DRR in this country? Who is the main driver of DRR in this country? Basically it is the foreigners! The government is basically guided by foreigners. For me, right from the very beginning, without the involvement of the local people and local culture and local authorities, I do not accept any of the DRR programmes. They are bound to fail!”.

Jones et al (2016, 34) found similar views. They quote a director of a national NGO who argues that the “major donors have included disaster risk management agenda into their development strategy and since Nepal’s economy depends on their development agenda” the government must go along with it. Within structures of the government and between government and communities, there are tensions. Within the government of Nepal (the Ministry of Home Affairs, MoFALD and Ministry of Urban Development) there are tensions between what the different ministries would like to focus on in disaster risk reduction and resilience efforts (Jones et al, 2016), the resources available to them and to local authorities and who is accountable for developing disaster resilient communities. Problematising and understanding how resilience is framed in internationally driven discourse, within DRR initiatives leads to questions of the relevance of resilience (Levine et al, 2012) in the rapidly urbanising context of Bharatpur, Nepal.

7.2.2 IAC’s project management tools: ‘resilience’ and ‘community’

The second way the IAC in Kathmandu utilise disaster resilience is as a project management tool. They are also aware of the tension created by the manner in which DRR interventions are structured utilising the concept of resilience. There is a mismatch of needs and expectations on what donors can achieve in Nepal and what practitioners can and should do and lastly what would be of most benefit to the beneficiaries of these projects and the larger local communities. The donors are

dedicating resources to focus on earthquake risk as the key hazard to address in Nepal, more so than landslides and flooding. The informants below are struggling with the way resilience is being utilised to emphasise indicators of project success to help address donors' desires to account for money spent in Nepal. Resilience is being utilised as a project management tool by the INGOs and donors. This is driven, at least in part, by the need for donors to report on the money they have received from taxpayers rather than a desire to implement what is most appropriate or relevant for people in Nepal.

The nine Minimum Characteristics (MCs) of a Disaster Resilient Community (Nepal Risk Reduction Consortium Flagship 4, 2012) were agreed upon by the Flagship 4 partners and the GoN and have been incorporated into disaster risk management projects and programmes of the IAC. These nine MCs include:

1. Organisational base at Village Development Committee (VDC) / ward and community level
2. Access to Disaster Risk Reduction information
3. Multi-hazard risk and capacity assessments
4. Community preparedness / response teams
5. Disaster Risk Reduction / Management plan at Village Development Committee / municipality level
6. Disaster Risk Reduction Funds
7. Access to community-managed resources
8. Local level risk / vulnerability reduction measures
9. Community based early warning systems

IAC informant #2 (who works at the interface between the donors, practitioners and the Government of Nepal) explains that the significant effort to create the nine minimum characteristics of a disaster resilient community primarily in rural Nepal utilising a community based disaster risk reduction approach:

“Has been encouraged, heavily encouraged, by donors along with impact analysis and assessment because there is pressure from donors who are getting pressure from their governments, who are getting pressure from constituents, about where all this money goes”.

In response to the question, “Why is resilience being used in this manner?” IAC informant #2 replies:

“But what else are they [donors and INGOs] going to use? Resilience is the term now that everyone understands and is so generalised that you can apply it to any field. It is so generalised. What other term is there for health, education, disaster, climate change”.

The reality is that resilience as a term does not have a common definition and decision-makers who use it in Nepal (IAC and the government) do not have a common understanding of the word. The nine MCs of a (rural) disaster resilient community may not be particularly relevant to people and communities according to IAC informant #2. They do not fully address the range of risks perceived by people in their everyday lives. This echoes the thesis argument in relation to research question one in Chapter 4. People view economic security in the form of jobs as their primary worry. According to IAC informant #2, the nine MCs are relevant in:

“Creating a collective and creating a mass movement of INGOs, people with money [donors] and of the government [of Nepal]. It is both. The nine characteristics are a marketing tool. That is what they are. They are a marketing tool to get the attention of and to try to make the concept of disaster management more understandable and easily integratable into other programmes [of the government]”.

The informant continues:

“I do not think they [the nine characteristics] are resilience, they are just, they are just a way to package it, but not a definition of resilience”.

A decade ago, Manyena (2006, 436) argued that disaster resilience could become a new phrase where its primary value would be “describing a desired outcome of a disaster risk reduction programme”. This appears to have become reality in Nepal. In the context of DRR and humanitarian work, Levine (2014) suggests the desire to operationalise or quantify resilience is an attempt by donors and practitioners to provide accountability for the funds granted. Most recently, due to the exasperation amongst donors and practitioners on an international scale with discussion about definitions of resilience, the grey literature is focusing on how to make resilience “useful” or how to operationalise resilience through indicators – in order to use it as a metric albeit without a common framework or definition. Operationalising resilience signifies the desire to develop indicators of resilience or benchmarks

regarding how to assess resilience in different contexts in order for resilience to be a usable management tool for governments, policy makers and practitioners globally. There are many unknowns with tremendous political, social and monetary implications for the donors, practitioners, recipient national governments and most importantly people and ‘communities’ who are expected to be more resilient due to the external support received. The relevance of resilience and for whom has been lost in this discussion.

Resilience allows donors and INGOs to work under an operational framework that structures their work in a new programmatic manner but what is lost or absent is the explicit focus on what comprises communities and people’s perception of risk. Part of the answer to research question four (How do international aid agencies understand urban risk and resilience in Nepal and to what extent do these understandings reflect the everyday lives and needs of urban residents) lies here. There is a disconnect between the manner in which the IAC is working in Nepal and how communities organise and attempt to address their perceptions of risk. There is not much of an overlap, let alone support structures in place to enhance community resilience to disasters. According to IAC Informant #2 who has worked for many years in Nepal:

“The whole idea of who is your community... I do not think they [donors and INGOs] are asking this question [who is your community for your DRR and disaster resilience project intervention]. The community is just this other thing at the end, which they then try to shove into a box for measurement purposes”.

HR: “So it [communities] is a project management tool”.

Informant #2: “Yeah.”

Communities formed by urban residents fall away as an object of analysis in this discourse of the IAC. Communities and people are missing from this discussion about resilience and how the INGOs function in this operational framework of quantification, log frames and accountability of funding. The concept of ‘community’ is being used as a project management tool and resilience is used as an operating framework where indicators of resilience are expected to be monitored and reported on. When people and the communities they form are considered by the

IAC, there is a simplistic understanding of Nepalese communities. IAC Informant #4 explains the manner in which some INGOs view Nepalese communities:

“Conception vs. reality? It is like painting a painting with a very rough pencil. We [INGOs] think community is homogenous, composed of a leader and the rest. That is the level of subtlety. Carrying on with the joke, then there are three types of community: hill, mountain and Terai and that is it. Then we have one organisation that works with disabled. So we have elite, community and one disabled person. That is the way it is”.

HR: “Do they [INGOs] talk of caste and ethnic groups?”.

IAC Informant #4: “The relationships within the group are completely not understood”.

This lack of understanding of the complexities of Nepalese culture including caste and ethnicity as well as gender roles underscores the top down nature of engaging with communities. “There is a strong assumption in development that there is one identifiable community in any location and that there is coterminosity between natural (resource), social and administrative boundaries” (Cleaver 2001, 44). De Beer argues that “the way community is defined by outsiders often fails to fully recognize the place of social networks and dispersed dependent power relations” (2012, 560). Also, until 2014, most CBDRR and resilience projects were implemented in rural Nepal (with few exceptions including Kathmandu Valley’s urban centres and Pokhara). The necessity to understand how the urban functions outside of the Kathmandu Valley, how to consider people and their communities leads to apprehension amongst the IAC. IAC Informant #4 comments on the limited understanding of what community is in the urban Nepal from the view point of INGOs. The international informant explains:

“There was such a limited understanding and so much actual open confusion about how to identify and interact with the urban communities”.

It is understandable that the IAC is concerned about how to identify ‘community’ and how to support communities to deal with possible disasters that the IAC views as important (earthquakes). Given the findings from Chapter 5 on Bharatpur’s urban ‘we’ and the forms of community identified (women’s groups and neighbourhood groups) as well as how they informally organise themselves to address a range of perceived risks in the city, there is much to learn.

The INGOs and the donors are frustrated with the way their international aid system functions and the way these IAC informants are involved in the mechanism. IAC informant #4 expresses frustration with the IAC and forms of working:

“We [INGOs] are trying to influence complex systems with very rigid frameworks of intervention which are log frames. On top of this, we have complex systems that are INGOs that are massive. Complex systems are everywhere”.

On a global level, resilience may now be “overused to the point of banality so that what was once referred to as putting down sand bags to stop flooding or ensuring that there are separate toilets for men and women are now described as resilience measures. The difficulty, therefore, is picking out usages of the term that have some genuine meaning.... the key connection is governance. And again, this governance is working from a distance” (Joseph 2013, 50). Governments in donor countries are making the decisions on what countries such as Nepal should focus on in terms of mitigating against disasters, which risks are most important and how this should be accomplished. Joseph does not think people and the communities they create play much of role in relation to the resilience discourse described above. They are not the priority in relation to governing for resilience. Rather he views resilience as a device “in an artificial construction where the real targets are states and governments” who need to be managed by the IAC (Ibid, 51) in order to implement international priorities such as DRR. This research agrees with Joseph, resilience is being utilised by the IAC to steer the government’s limited efforts towards DRR but some elements to build resilience are ignored (i.e. linkages between government and people).

7.2.3 The mythical urban resilient community in Nepal

As mentioned in the beginning of this chapter, the MoFALD stresses that most of the responsibility in the event of a disaster will be at the community (neighbourhood) level. A myth continues to be perpetuated that communities “are capable of anything, that all that is required is sufficient mobilisation (through institutions) and the latent capacities of the community will be unleashed... the evidence does little to support such claims” (Cleaver 2001, 46). The MoFALD official argues that the role of the government is in a support function, it only plays a small role. In Nepal, the

lowest level of government is the ward; there is no formal public sector mechanism to support the neighbourhood level. This results in the government having the flexibility to decide whom to support in time of crisis and whom to ignore due to informality in its procedures (as discussed in Chapters Five and Six). IAC Informant #3 raises the problematic nature of an urban community:

“In the urban, people [INGOs] are still trying to figure it out [what is a urban community]. American Red Cross used the neighbourhood level... even the neighbourhood definition, may not be sufficient because neighbourhoods may be changing rapidly and especially with urbanisation”.

The senior MoFALD official also problematises communities in an urban municipality:

“In one ward there will be four or five communities, difficult to merge these four - five communities into one, and each community has its separate problems”.

The MoFALD respondent explains that urban communities, created on a geographical basis smaller than the ward are expected to be self-reliant with minimal support from government because the government does not have the resources and capacity. This research has shown people cope in the urban everyday of Nepal, at times showing resilience or reworking (Chapter 5). Nevertheless in times of a disaster or an event, Nepalese people struggle to understand how the event will be enacted and they desire and need a government to lead (Chapter 6). The MoFALD official based in Kathmandu clearly understands the tension between how the national government with the backing of the IAC is structuring disaster resilience and the recognition of the role of the public sector in managing resilience building efforts. For example, MoFALD is requiring municipalities to have disaster management plans including on the ward level. The central government explains that local authorities will have a budgetary provision for disaster resilience but it is unclear how the minimum characteristics for a disaster resilient community, historically developed for rural Nepal, relate to communities in the urban setting. It is unclear how they will be adapted for the future. The government has ward secretaries but there is no formal mechanism in place to link to the neighbourhood groups. There are not clear signals that the government has intentions to work with all neighbourhood groups based on evidence provided in Chapters 5 and 6. There

are also many residents in the city who are excluded from neighbourhood groups thus who are not resilient with the support of the social structures in the city.

International informant # 4 explains that IAC:

“Assumes people in power [in local government] make decisions based on information. And they do not. They do not require information, often they do not require information because they do not make decisions that are consultative, and they’re not interested. It is not a system where they are accountable to the communities; they are accountable to their seniors [in central government]. The concerns of the seniors outweigh the concern of the communities”.

There is tension between local government and people and the communities they create. As discussed in Chapter Five, urban residents struggle to establish a relationship with the local government. Only by organising into local level organisations can some residents communicate their needs to the government. Even so, it is difficult for urban residents and their groups to get their views heard by the government of Nepal. This was expanded upon in Chapter Five. The local government officials are not elected, they are chosen by the central government. They are frequently moved to different parts of the city and also to other cities on a regular basis. This further motivates the officials to please their superiors in Kathmandu rather than engaging with residents and their groups. According to Nightingale and Rankin (2015, 163): “most international donor funded development programs are currently underpinned by considerable faith in the capacity of community-based organisations to hold political actors accountable to standards of efficiency, fairness and inclusion. Yet, this quest to engage civil society is premised on a separation of political from economic dimensions of inequality (Wood, 1995). As such, these programs fail to confront the link between extreme socioeconomic inequality and the lack of effective representation in political spheres”. In the rush to redistribute responsibility for disaster resilience from government to communities, it is increasingly problematic if the role of government is lost in this discussion and the burden to be resilient is left to the individual or to the urban “we” in its various manifestations (Chapter 5). If the focus is on community in the form of neighbourhood groups the more vulnerable members of society are left unseen, unheard and not resilient.

In the past, the “[development] gaze turned peasants, women, and the environment into spectacles” (Escobar 2012, 155). Now it could be argued that the international DRR and development discourse is creating so called resilient people as the spectacle without genuinely engaging with people and communities. The manner in which ‘community’ is being utilised in the Nepalese disaster resilience discourse and also the formulaic project defined geographical approach to communities is not relevant to people living in changing and urbanising settings. For example, in Nepal the local disaster management plans that need to be developed by each municipality are considered from the ward level and higher. Forms of communities as was shown in Chapter 5 are created on a lower geographical level than this.

De Beer (2012) argues that if community involvement or participation does occur, it is under the terms and conditions set by the IAC, not by people. Esteva and Prakash (1998, 283) rally against the notion of participation, arguing that participation of people, in effect, and communities is “used to confer political legitimacy and technical elegance to developers’ promotions and to governmental plans”. By utilising the phrase disaster resilient community under CBDRR projects, the IAC in Nepal create an illusion of moving forward and supporting the resilience of people to natural hazards in Nepal. This is the hazard the IAC wants Nepal to focus on. What is not accounted for in this discussion is an understanding of what people in Nepal perceive as risks both in their everyday lives and when other events occur. Understanding how people create communities and what type of linkages they desire to build their strategies both for resilience and reworking is missing from this discussion.

The concept of disaster community resilience allows outsiders such as the IAC in Nepal who would be interested to influence the structures and behaviours of governments and groups in disaster risk reduction to stake a claim about building resilience. Community resilience to disasters can be considered another grand plan (Scott, 1998) introduced by the international community to enhance the lives of people. But, disaster community resilience does not sufficiently engage with rural and now urban dwellers to consider what is most important to them and how they view their strengths and weaknesses. It has been introduced with well-wished

desires that prove difficult to produce impact for people in practice. “The limits to resilience are real. Although it might increasingly pervade international organisations, this does not necessarily have any meaningful effects on the ground”, (Joseph 2013, 52). The manner in which the concept is being utilised in the disaster resilience discourse, and the top down driven approach supported by donors in Nepal is a mismatch with the needs of people in Nepal and in cities such as Bharatpur.

7.3 Resilience as a critique of development

Resilience has been encapsulated in a wider debate critiquing development and how to consider the actors involved in development. Rigg et al (2016, 64) explain that in Nepal there has been “a dramatic decline in under-five mortality from 323 to 36 deaths per 1,000 between 1960 and 2013, and a near doubling of life expectancy from 35 to 68 years over the same period. Adult literacy has improved from 21 per cent of the adult population in 1980 to 60 percent in 2010”. These are significant achievements. Although much has been accomplished since the IAC introduced ‘development’ to Nepal in 1951, the IAC is aware there remains a great deal to do in raising the standards of living for many Nepalese. However, there is also an awareness that in Nepal as in other places, development has helped to manufacture risk (Cannon and Muller-Mahn, 2010). In Nepal, land prices have skyrocketed, land use is not governed effectively, there has been significant movement from rural to urban areas, the political situation is volatile and lastly, the economic situation is stagnant thus leading to significant migration of young men to other countries.

7.3.1 “Retrofitting development”

A high-ranking Nepal Risk Reduction Consortium official’s (Nepal IAC #1) view has changed in the past three years having worked with resilience:

“I tend to say now resilience is a substitute for bad development. Resilience is a synonym for retrofitting development”.

Instead, this international informant proposes a holistic view of a disaster resilient community:

“Ideally, there would be a context where there was accountable local government. Ideally, in a context where there was a shared understanding

between that accountable local government and community representatives of what the hazards were that the community was facing. There was a sense of ranking of hazards. Shared understanding of which components of the community, which individuals might be more vulnerable, where planning had taken that into account... How to protect the most vulnerable from the most immediate hazard or event. Where whatever form of local enterprise, local business in that community, have been very much involved in these discussions... Where there was trust in local security forces and to step forward and do their jobs”.

The relationship between development and disasters warrants consideration. “Disasters should be understood as unsolved development problems since they are not events of nature per se but situations that are the product of the relationship between the natural and organizational structure of society” (Cardona 2004, 50). IAC# 1’s nuanced interpretation of a disaster resilient community is comprehensive, holistic and entails a variety of actors on multiple scales working together for a common goal. This includes an accountable local authority working together with community representatives to understand the hazards facing residents including those more vulnerable. This interpretation also includes planning for the future. Local enterprises are included in this description of a disaster resilient community and their role post disaster is envisioned and discussed in planning. Lastly, the need for trust in local security officials highlights the uncertain role of the security forces in a country that had a ten-year conflict as well as the important role they play in post-disaster response. I argue this holistic representation is more than ‘resilience’. This describes an environment where the future can be hoped for in which all actors are working together for a common, more positive, safe future. This interpretation of a disaster resilient community may not have the traction to be translated into reality in Nepal. Another international official, Nepal IAC informant #2, who has been working for several years in Nepal utilising Nepal’s Nine Minimum Characteristics of a Disaster Resilient Community suggests:

“Community resilience is broad, encompasses all components of community life. Disaster resilience is a component. What I really think and from what I have seen, in order to talk about resilience, you have to talk about the bigger context of how to improve livelihoods”.

HR: “Livelihoods?”.

Nepal IAC informant #2 continues:

“Yeah, so you cannot talk about [disaster] resilience if people have nothing. And they have no capacity to think about tomorrow. ...So if you are going to talk about resilience, I think you need to talk about how you are looking at basically improving the opportunities for people to access [pause], to access even medium, short term planning. Even to look at that, you need to look at what systems they are linked into, and if they are linked into any systems, support groups, education, health, broader context and to look at specifically, disaster resilience, I think it is useful only in a bigger context”.

This informant differentiates between disaster resilience to a hazard and resilience as a more general concept where people have opportunities for a better life on their own terms. Nightingale (2015, 194) suggests that in Nepal, there is a concern with “devolving responsibility for resilience to locally based populations, and yet how they propose to do this, and what support is required to achieve these goals, is very different”. She suggests creators of policy and local people understand long-term livelihood security in a very different way. In addition, policy makers and local people view people’s aspirations and understandings of community differently. I agree with Nightingale, there is a disconnect between the long-term focus on hazard events and more everyday disasters including livelihood issues (as highlighted in Chapter 4).

In an interview post earthquake in 2015, another international expert working on CBDRR (Nepal IAC informant #4) highlights interrelated issues (exclusion based on caste, and also the relationship between the economy and governance) that have been ignored until now by CBDRR disaster community resilience projects. Within Nepalese society:

“Exclusion [in society is] based on caste basically. There is a lot of corruption. The [national] budgets are not used properly. The budgets are used to reinforce the system. Basically, when we talk about resilience, when we talk about systems, in Nepal the system is actually so broken down, the communities are on their own for most of it. So need to address governance issue. This would be the starting point. Also poverty and economy. The livelihoods of the people do not give them enough space to get out of the poverty trap. [The focus of the IAC] should be less about disasters and more about other things in my opinion. More about economy and governance. Disasters are important, but the individuals are working all year to get out of poverty trap, the disaster reduces a bit of effectiveness or efficiency of what they have achieved”.

The informant explains that the government represents an exploitative structure against large portions of the Nepalese people. This international CBDRR expert expressed the need for a stronger civil society to hold the Government of Nepal to account. The informant concluded by saying, “I think they [the Nepalese people] are pushed to the limit”. This informant suggests Nepalese people cannot do more for themselves. They are already resilient subjects (Evans and Reid, 2013). They need other scales to support them, such as the local authorities and the central government to have a better quality of life and a safe future. This is the same government who believes communities should help themselves. There appears to be a concern amongst the IAC as to manner in which the concept of resilience is utilised in their own discourse. They are dissatisfied with the narrow application of resilience to a hazard. They are seeking a more holistic view of the issues residents face. The IAC is critiquing development in Nepal.

7.3.2 Whose priorities matter in Nepal

Donors and practitioners bring their own priorities (such as disaster risk reduction as well as an emphasis on particular hazards such as earthquakes), language and tools (for example, disaster resilience and community based disaster risk reduction) to Nepal. The following is an excerpt from my first Bharatpur fieldwork report to my PhD supervisors in November 2014:

“There is a disconnect between what the IAC is focusing on: disaster planning, CBDRR, disaster management and what the municipality of Bharatpur is focusing on: politics, urban growth, (lack of) urban planning and urbanisation. Donors and practitioners bring their own priorities (such as disaster risk reduction, earthquakes and the NBC, the rights of the child, autism awareness) to Bharatpur, language and tools (TLOs and disaster resilience), thus impacting a variety of scales and stirring up the local dynamics. Are earthquakes and resilience two subjects that are interesting for us as foreigners to influence and research but do not have much relevance for people? Yes this is true, but given this, how do we make disaster resilience relevant and should we?”.

This excerpt from my first fieldwork report is in essence a critique of international development and the way the IAC functions in Nepal. During my subsequent fieldwork trip (April 2015, two weeks before the earthquake), I participated in an international conference to build resilience to earthquakes involving 40 natural and

social scientists as well as practitioners and policy makers. I questioned the focus of DRR in my fieldwork diary:

“Is DRR a way to focus on hazards and ignore issues that concern people? People’s attention span, the time frame for their perception of risk, is different than ours due to the difficulty of everyday life here”.

The second excerpt reflects the priorities of external actors and the lack of a connection to Nepalese people’s perception of risks. Voss and Funk (2015, 255) argue that resilience discussions within the context of disasters and climate change are based, to a significant extent, upon Western concepts and thus are not particularly relevant in the Global South. Leach (2008, 3) argues, “Narratives / framings are produced by particular actors, and co-constructed with governance and intervention strategies and the power relations these involve”. The language of resilience appears to allow decision-makers to hide behind people who are left the responsibility to help themselves in times of hardship. These are people who are largely “pushed to the limit” in the words of IAC informant #4.

The labels ‘social minorities’ and ‘social majorities’ help to shed light on why there is a disconnect between the Western focus on disaster risk reduction and resilience, and the manner in which most people live their lives and what they view as important to reduce risk associated with their own version of disaster. These are disasters that occur in the everyday and through events. Esteva and Prakash (1998, 295) explain that the world’s “‘social minorities’ are those groups in both the North and the South that share homogenous ways of modern (western) life”... “The ‘social majorities’ have no regular access to most of the goods and services defining the average ‘standard of living’ in the industrial countries. Their definition of ‘a good life’, shaped by their local traditions, reflect their capacities to flourish outside the ‘help’ offered by ‘global forces.’” Mohanty (2003, 506) finds this language of social minorities and majorities and what constitutes a good life useful because these categories are “based on the quality of life led by peoples and communities in both the North and the South”. The western scientific paradigm focusing on hazards and DRR without an integrated connection to development issues is not effective in Nepal. A discursive change is needed by the IAC in Nepal to accommodate the

needs of the majority of the world and to engage and support the efforts of people to better the quality of their lives in a way that suits their understanding of a good life.

The “framing of resilience within mainstream debates is at odds with the kinds of relationships, practices and aspirations of local people” (Harcourt and Nelson 2015, 21-22). If the IAC community listened to the risk perceptions of residents (Chapters 4 and 6), the IAC’s interventions may be structured in a different manner. This would involve more of a focus on livelihoods, urban infrastructure and the relationship between government and people. Governance would play a key role, where linkages between people and government would be enhanced so they can work together in the short and long term, on everyday and other risks including less frequent earthquakes and floods. These types of projects may be difficult to account for in a log frame or other project management tools. The impact from such projects would also not be immediate thus making it difficult for the INGOs to show the impact of their projects to the donors. Focusing on disaster resilience is insufficient in this context. Whose priorities and whose knowledge are considered and valued is of relevance to this discussion. If space is created for power relations to be acknowledged and discussed, resilience can be utilised to “decenter development, that is, to displace it from its centrality” (Escobar 2012, xii) of “expert knowledge and power” (Ibid, xiii). If “alternative understandings of the world, including of development” (Escobar 2012, xi) are included, then resilience may not be the concept promoted by the IAC. I argue, listening to people and their perceptions of risk would be an appropriate starting point for these discussions related to a safe future.

7.4 Considerations for a safe urban future

Difficulty in understanding the urban context in Nepal for the IAC partly lies with their starting point which is comparing cities from the global North as crucibles of modernism (Robinson, 2006): including the mechanisms of a functioning, formalised urban government that provides electricity, solid waste management, water, education and social services. In the urban environment in Nepal much of the above is lacking. There is a “hegemonic opposition between northern modernity and southern developmentalism” (Peake and Rieker 2013, 4). The Nepalese urban

context has political, economic, social and material messiness including the lack of or ineffective provision of basic physical infrastructure, the lack of or ineffective urban planning, unutilised land use plans, a lack of urban management tools such as maps and registers of who lives in the city. In addition to this, there are natural hazards such as earthquakes and flooding which impact urban settlements of Nepal including Bharatpur. As a result, “much of the normative development agenda that emphasizes the mobilization and concretization of social capital, secure tenure and stable frameworks for local level participatory governance simply do not apply to what is perceived as the major challenge of urban life” (Simone 2008, 200) in a post conflict, low human development index country such as Nepal.

Due to the continuing migration from rural areas to the urban, the IAC is increasingly interested in urban Nepal. They are aware that the Nepalese urban differs from the Nepalese rural (as witnessed in the number of INGO organised events, conferences and taskforces to address this issue of rural vs. urban). What remains to be answered for the INGOs is the question of how best for the IAC “to work in the urban” as was frequently phrased by the IAC. The urban context in Nepal has been dramatically reconfigured in the recent past. MoFALD created 159 new municipalities in less than one year (adding to the existing 58) thus transforming Nepal from a rural country to an urban country in October 2015. The senior MFALD official explains:

“17% of Nepal was urban in November 2014, now there is an increase of 23% [in municipalities] so now 40% of the Nepalese population lives in urban areas [as of October 2015]”.

Due to the recent amalgamation of many rural areas in Nepal into municipalities, high-ranking NRRC official’s (Nepal IAC #1) view on the current urban situation reveals the tension donors and INGOs face in Nepal:

“So I do not know what will happen in the next year [2016] [referring to international assistance to municipalities and the rapidly urbanising environment of Nepal].”

The IAC will not be supporting the new urban structures immediately. Initially, the donors will observe how the urban will be envisioned by the MoFALD, how the central government will engage with local authorities, and of critical importance to

most respondents in Bharatpur, the IAC will wait to see if the central government will allow local elections. The municipal and urban situation will change dramatically in the next years (2016 and beyond). The influence of scales and the powerlessness of residents and their community groups to address structural changes in urban Nepal are evident.

7.4.1 Being safe in the city

In this discussion of resilience, community and DRR, a scale mismatch is evident not only related to power but access to resources. People desire to be seen by the government, to be made visible to the government (Chapter Five) and the various forms of support it can offer communities. Neighbourhood groups, as a form of community, articulate clearly that to address perceptions of risk in their urban environment, they need to make a collective vertical link with the government. When urban dwellers speak about their future and what would keep them safe, they generally refer to a combination of themselves as individuals, their community and the government. When the MoFALD senior official spoke of disaster safe communities (his interpretation of disaster resilience), he placed the community at the centre and suggested that the government was not of critical importance, it was on the periphery. “Struggling for the command over a particular scale can, in a given sociospatial conjuncture, be of eminent importance” (Swyngedouw 1997, 141). In this context, the government wields significant power and control, they can decide which urban communities to support and whom to ignore in times of need.

It is necessary to consider ‘scale capacities’ – the ability to exercise power and influence across particular spatial scales – and how these capacities vary by social position along class, gender, caste and ethnicity (Swyngedouw, 1997). It is of relevance in this discussion about resilience to consider how power and influence is considered at the scale of the international level, the national state, and local level of government and downwards to the “politically impotent scale of community and neighbourhood” (Rankin 2004, 64). “Ideas of resilience are placing responsibility for access to resources and services in the laps of local-level actors” thus creating an environment where “the blame can be placed on the local community” (Nightingale 2015, 205) if the response to an event or everyday life is not adequate. There is a

scale mismatch where power is not with communities rather it is with the IAC and the government of Nepal. In this context of a rapidly changing government context where much of Nepal is considered 'urban' by the government and municipalities are receiving additional responsibilities, it is difficult to consider what is a resilient urban community. How to be safe in the city of Bharatpur.

Addressing root causes of poverty, vulnerability and systems of governance can not be achieved by the framing of community resilience if this mismatch of scales and power relations continue to be ignored. Nightingale (Ibid, 183) found a: "'Scale mismatch' between the way policy-makers define resilience and the technologies through which they believe it will be achieved, and how local people define community resilience and their aspirations for livelihood security". Resilience as a concept does not have much value for Nepalese people. They are extremely resilient already and hope for more than resilience. A space for the voices that are not represented needs to be made. Normativity of resilience masks issues of power, temporality and spatiality. "Political choices... including decisions about whose perspective (and whose resilience) counts" (Levine 2014, 6) must be considered. "Power relations are involved in assigning or avoiding responsibility and accountability; the domination of certain framings / narratives over others, asymmetries between pathways, and which are pursued and which are not" (Leach 2008, 15). Power relations are essential to understanding this changing environment in Nepal and in the fieldwork city of Bharatpur.

Why, how, by and for whom resilience is of value or a necessity is not often addressed. Carpenter et al (2001) first questioned "Resilience of what to what?". This question continues to be pertinent. Using the understandings of development studies and science and technology studies, Leach suggests asking "'resilience of what, for whom?'" (2008, 3). I argue that creating a debate where questions such as "whose resilience is important?" to "what event / hazard?", "whose lens is being used to discuss resilience?", " "who impacts resilience?" are asked will further the discussion and make links between risk and risk perceptions of people. Ziervogel et al (2017) argue for inserting rights and justice into framings of urban resilience. In their research in African cities, they found a focus on everyday was critical to

understanding root causes of risks for urban residents. By asking about and understanding the power relations and the range of scales involved and the intersectionality between those scales only then can resilience be used as a concept to benefit those who need more than resilience in their urban lives.

7.4.2 Cities, people and resilience: retaining promise

This research argues for cautious hope to be exercised in utilising the concept of resilience, especially in relation to urban, disaster and community. It is problematic to consider disasters and other risky events that arise in the future if residents, their perception of risks and how they address risks are not taken into account. The IAC should not consider planning for these ‘disasters’ without understanding how and why the everyday functions in the manner it does and what people worry about in the everyday, when events occur and for the unknown future. This is especially relevant in the little understood urban reality of Nepal. This grounding in the everyday provides clues to limitations and possibilities for the future and how residents cope and possibly prepare for a safer future with support from local authorities.

INGOs do not see these flows of people and their coping mechanisms in part because some or most of the urban social fabric is not structured through formal organisations (Levine, 2014). People, their worries and mitigation of perceived everyday risk is structured in ways that are often informal. In the everyday, urban residents function in a grey space where they create a hybrid of coping mechanisms that enable residents to create a life in the urban. Even though residents function in the grey space, it does not mean people are lacking or passive (Robinson, 2006). The urban residents “continuously try to remake both themselves and the city” (Simone 2008, 200). Mitigation of long term hazards such as an earthquake is not relevant in the lives of urban dwellers who are trying to cope, get by, who are interested in their wellbeing in the short and medium term. The struggles and worries of residents in Bharatpur diverge with the IAC. The aspirations for a safe future do not necessarily intersect with the concerns of the international aid community and its focus on topics such as DRR. “The questions to ask should not be shaped by a tendency to formulate solutions always aimed at some more efficient integration of the poor within economies and institutional cultures that are framed

and generated exterior to their actions” (Ibid). Rather, the IAC and the government should consider how to “interact with the changing practices of adaptation and livelihood” strategies undertaken by urban residents (Ibid).

Combining problematic and difficult to define concepts such as ‘urban’, ‘community’, ‘city’ and ‘resilience’ can lead to tensions in understanding how these concepts are utilised and for what purpose. According to Vale (2014), for a city dealing with disasters, resilience can be comprised of three elements: physical infrastructure, economic empowerment – livelihoods, and lastly social capital. He does not mention the role of government, which my research demonstrates is a key component of resilience. Vale argues that when applied to cities, resilience is particularly problematic yet it also retains promise. He suggests resilience can only remain useful, as a concept if it is associated with the need to improve the life prospects of disadvantaged groups in the city. Vale suggests “resilience takes place across a highly differentiated landscape of risk, and is intimately tied up with deeply political choices that are being made by public and private leaders about how to manage such spaces” (Ibid, 194). I argue that engaging with the concept of resilience has merit. Supporting Ziervogel et al’s (2017, 126-127) argument that the concept “continues to hold value because of its systems orientation and multi-scalar approach to addressing complex, everyday stressors in socio-ecological contexts”.

The relationships between different scales and pathways is important to the concept of community resilience because the different scales impact levels of resilience, type and composition of resilience in other scales. Cumming et al (2006, 8-9) argue, “centralized institutions frequently lack the necessary multi-scale outlook and associated flexibility to solve unusual problems or those that occur at scales that they are not used to considering”. This suggests governance of resilience pathways need to be “*inclusive, deliberative and open* involving as many actors and stakeholders in society as possible” (Wilson 2013, 307) [italics from the original text]. Coaffee et al (2009, 3) suggest resilience in cities “is most effective when it involves a mutual and accountable network of civic institutions, agencies and individual citizens working in partnership towards common goals with in a common strategy”. Ziervogel et al

(Ibid) propose a similar strategy for African cities, to use a rights and justice based empowerment focus for resilience. All of this remains to be fulfilled in Nepal.

7.5 Conclusion

This empirical chapter answered research question four (How do international aid agencies understand urban risk and resilience in Nepal and to what extent do these understandings reflect the everyday lives and needs of urban residents). The IAC has utilised the resilience lens as a bridging mechanism through which INGOs and donors can work together in Nepal. In this context, ‘resilience’ and ‘community’ are project management tools to measure the effectiveness of projects. Resilience has emerged as a critique of development, where resilience projects are utilised to “retro fit” development. The lack of focus on livelihoods, as a basic need of people, has been insufficiently addressed and there is a mismatch between Bharatpur’s residents’ perceptions of risk and the priorities of the IAC. In the rapidly urbanising world where the social majority live increasingly in cities such as Bharatpur, a discussion centered on people, community, power and community resilience in cities may be a more applicable framing to the urban residents who will ultimately bear the impact of a hazard, an event, a shock or stress. It is therefore critical to understand how urban dwellers define their community, how they define components of resilience, and how and if this can be supported but not necessarily assessed.

If cities and communities within them are to enhance their resilience (or be more than resilient) to an event, a natural hazard (Fernando, 2012; Gaillard, 2007; Tobin, 1999) or specifically a seismic hazard (Ainuddin and Routray, 2012; Bruneau et al, 2003) then power issues need to be considered. Only by asking questions such as “whose resilience is important?” to “what event / hazard?”, “whose lens is being used to discuss resilience?”, “who impacts resilience?”, only by asking and understanding the power relations, the range of scales involved and the intersectionality between those scales, can resilience be used as a concept to benefit those who need to be more than resilient subjects. It is in this context of ordinary medium sized cities where further exploration of people’s perceptions of risk, economic security, interrelationships of communities and lastly, relationship to local authority is warranted.

Chapter 8 Conclusion

8.1 Introduction

This research links the everyday lived experience of urban residents with less commonly occurring events thus showcasing the inter-relationship between the everyday and events. An achievement of this thesis is understanding residents' perceptions of risk in different temporal contexts and also interrogating the framing of disaster resilience from the international aid community. This thesis weaves a range of literature on the perception of risk, everyday geographies and events, urban informality and resilience to understand how urban residents perceive risks in their everyday lives in an increasingly urban environment. Urban living is relatively new for most people in Nepal. Until 2014, Nepal was 83% rural (IFAD, 2014; Tanaka, 2009). The city is a form of territory, scale and politics that is disrupting normative assumptions (Simone, 2015) about how to live. The city is a new form of living and behaving, where not only are the majority of urban residents new to the city but also social networks are being adjusted and altered for the urban. Relationships with the local authorities are also being created, developed and adjusted over time. Envisioning the city "as full of twist and turns, plural genealogies and 'strange' gatherings of fragments, efforts and forces" (Ibid, 8) allows for a new interpretation of how Nepal's cities can evolve in the future.

My research offers insights into the everyday lives of residents in a medium sized city, including how people live their lives, their concerns in the everyday and their concerns for the future in order to be safe. The urban is considered informal; not only are residents and their coping mechanisms informal but as important to consider is the informality of the government who is using informality to its benefit. Rather than considering urban hazards and disasters from the viewpoint of government and the international aid community, urban residents are the focus of this research. The emerging research findings are at odds with the way the international aid community attempts to support countries such as Nepal in disaster risk reduction and through the way the IAC utilise the concept of resilience.

The urban presents challenges for residents who are forging an urban future often without government support and who are primarily concerned with economic security and creating a future for their children. Urban residents, in the form of the “urban we” (Simone, 2015), are working together in informal groups to support themselves and their communities. The resilience concept brings a new lens on a set of problems that have been debated over the past two decades in the disaster risk reduction field, most recently under the Sendai Framework for Disaster Risk Reduction 2015 - 2030 (UNISDR, 2015). Resilience can be used as a bandage on development done poorly, or “retrofitting development” in the words of one key informant, or it can be utilised more constructively in the future to the benefit of the urban residents that the IAC seeks to support by incorporating the knowledge, understandings and needs of urban residents. This conclusion is a summary of my research including the findings and contributions, an evaluation of the approach taken and lastly, considerations for future research.

8.2 Research findings and contributions

This thesis argues for a broader and deeper understanding of urban risk perception in ordinary medium sized cities of the world such as Bharatpur, Nepal, and for this understanding to inform resilience interventions for the future. In doing so, the study makes an empirical and conceptual contribution to the field of disaster resilience, as well as the wider DRR policy agenda.

My research set out to address four research questions. The first sought to understand how local risks are perceived and understood in Bharatpur city through an intra-urban comparison (McFarlane et al, 2016) of two wards (4 and 11). Respondents’ perceptions of risk were found to be shaped by their location in the city, their occupancy status (whether home owners or tenants), their income levels and sources of income (for example, whether engaged in local employment or international migration), caste and ethnicity, and well as length of time in the city (for example, whether they were high caste newcomers or indigenous residents who had been living in the city for decades). Ward 4 respondents were found to be heterogeneous in their responses to everyday worries that impact themselves and their families with responses including poor health, limited employment

opportunities, access to education, secure housing and some residents were also concerned about the poor quality of the urban environment. Ward 11 respondents were more homogenous in terms of their everyday worries and were mainly concerned with their own economic security and the poor quality physical infrastructure in the ward.

The second research question explored how residents addressed the risks they faced. Some everyday risks were addressed mainly through participation in informal groups to create a sense of “we-ness” (Simone, 2015). These informal groups in particular, tole level organisations and women’s groups, were an informal governance mechanism that serves a vital role in urban infrastructure provision (financial, social, physical and environmental). The research found examples of urban resilience and reworking (Katz, 2004) in the rapidly urbanising and changing setting of Bharatpur. Resilience is only a “means of getting by and recuperating one’s self, community, or resources in the face of dominant social forces” while reworking tends to “recalibrate power relations and respond[s] to injustices” (Katz 2010, 318). For example, the women’s groups showcase forms of urban resilient infrastructure but are not allowed to rework the urban for their collective benefit.

In an atmosphere where local government provision is heavily influenced by caste, affluence and geographical location, the male dominated TLOs are attempting to rework the urban through their collective efforts. For example, the TLOs co-finance with the local authority the provision of paved roads in the neighbourhood. Ultimately, the community groups desire to be recognised by local government. At present, the government decides how communities are defined and managed, with the government managing the grey space of informality to suit its own agenda rather than addressing the concerns of residents in wards 4 and 11. If agendas overlap, as was the case with the physical infrastructure provision, this usually occurs in locations where high caste and affluent residents live, for example in ward 11, rather than in areas where mixed groups or lower income residents reside. Residents not engaged in a community group such as tenants and informal settlement dwellers of ward 4 are also excluded from dialogue or linkages with the local authority and are not allowed to rework the urban to their benefit.

The third research question explored how residents perceive the urban risk environment when events occur. Two events were analysed from the perspectives of residents in wards 4 and 11 and a newly amalgamated village called Mangalpur. The two events were the change of status from a municipality to a sub metropolitan city and the 2015 Gorkha earthquake. In this research, events are occurrences that are “extraordinary, punctuating” and which “throw lives out of kilter” (Rigg 2007, 17). This research shows that the earthquake itself was not the most important infrequent event to impact respondents due to minor damage caused in the city. Rather, by centering the discussion on the city’s residents, and what they perceive to be the main risks faced, the change in local authority status was considered the most significant risky event for residents. Findings show that the transition to a sub metropolitan city alters respondent’s perceptions of risk, particularly amongst the more vulnerable respondents such as the indigenous group in ward 11 who do not perceive their area to be part of a ‘city’. The perception of risk accumulating through the expectation of taxes being increased is problematic for the poorer respondents. The sub-metropolitan city status is also impacting on the risk perception related to poor physical infrastructure. Residents fear that priority will be given to the new wards created (under the SMCB) and these new wards will receive physical infrastructure in the form of paved roads to the detriment of wards 4 and 11.

The second event, the 2015 Gorkha earthquake, exacerbated the everyday marginalisation of those who do not have influence in the city. This marginalisation, based largely on caste, determined access to government services post earthquake to assess structural damage to houses. The change in the local authority status and the 2015 earthquake shaped respondents’ perceptions of risk in wards 4 and 11, and in the former village development committee of Mangalpur. Residents considered how to incorporate these events into their lives through accumulating additional risk and or changing their response to perceived risks. Through the anticipation of the local authority’s land use plan being implemented, the joint informal maneuvering of the local authority and the TLOs may need to be changed. In wards 4 and 11, the TLOs are unsure how to adjust their informal reworking strategies through which they have accessed the provision of physical infrastructure (paved roads). These events

separately and in combination highlight the changing risk environment and the critical role of local government in risk governance systems.

The fourth research question explored how the international aid agencies understand urban risk and resilience in Nepal and to what extent these understandings reflect the everyday lives and needs of urban residents. The IAC is utilising the resilience lens to guide its DRR activities in Nepal. The resilience lens is a strategic bridging mechanism through which INGOs and donors work together in Nepal. In this context, ‘resilience’ and ‘community’ are project management tools to measure the effectiveness of projects and to report on how funds were utilised to the donors. Resilience is also emerging as a critique of development, where resilience projects are utilised to “retro fit” development in Nepal. The lack of livelihood opportunities, as a priority need of people, has been insufficiently addressed and there is a mismatch between Bharatpur’s residents’ perceptions of risk and the priorities of the IAC. In a rapidly urbanising world where the social majority (Esteva and Prakash, 1998) live increasingly in cities such as Bharatpur, a discussion centered on people and power in cities may be a more applicable framing to the urban residents who will ultimately bear the impact of a hazard, an event, a shock or stress than disaster resilience.

The overarching contribution of my research is the linking of disaster and urban studies of ordinary medium sized cities. This is achieved by linking the concepts of risk perceptions, resilience, community and a multi scale analysis. This research argues to de-privilege disasters and a conceptual space is created for engaging through time and space with a broader interpretation of urban risk and urban resilience as perceived by a range of actors from the local to the national and to the international scale. The **primary** contribution of this doctoral thesis is the insights gained into the range of urban risk perceptions and the multiple ways in which urban ‘communities’ are addressing these perceived risks. This is achieved through the use of an intra-urban comparison (McFarlane et al, 2016) of residents’ perceptions of risk in a core urban ward of mixed usage (ward 4), and a rapidly urbanising ward (ward 11). This research contributes to a richer understanding of urban risk perceptions and the inter-relationship between the everyday lived experience of

respondents and of infrequent events. Residents view the role of the local authority as a particularly important form of risk governance both in everyday life in the city (Rigg, 2007) and through the lens of two events. The local authority manages the informality (Alsayyad and Roy, 2004) of the urban by allowing some groups of residents to address their perceived risks with the support of the local authority while excluding large segments of urban residents from being able to link to the local authority. Bharatpur provides an opportunity to learn from its residents: what they perceive as risks, how they enact resilience (Katz, 2010) and or rework the urban (Katz, 2010), as well as how they attempt to create and influence a future that is of benefit to them and their communities.

Medium sized cities in the global South such as Bharatpur are under researched (Dodman et al, 2013). While Bharatpur can be viewed as an ordinary or insignificant city (economically, politically and spatially) in the global context, such cities are where the majority of urban residents live (World Prospects Report, 2014) and thus warrant research and consideration. Cities such as Bharatpur are characterised by the relative absence of state provided resources including social services and physical infrastructure. This research and its fieldwork site, Bharatpur, are relevant for South Asia due to the focus on residents who can be considered the social majority of the world (Esteva and Prakash 1998, 295) in terms of irregular “access to most of the goods and services defining the average ‘standard of living’ in the industrial countries”. These residents are engaged in creating their own urban future and thus are vital to research. Through this research, I contribute to an incremental understanding of the changing urban environment of the world.

The complex relationship between local authorities and urban dwellers is explored. In doing so the research contributes to the understanding of the complexity of informality in the urban. In Bharatpur, respondents create informal groups to support each other in order to mitigate perceived risks. Groups such as tole level organisations attempt to influence the local authorities to provide physical infrastructure in the form of paved roads and drainage systems. Other groups such as women’s groups are informally utilised by the local authorities as forms of urban infrastructure providing environmental and social services to communities within the

city. This research contributes a nuanced understanding of the relationship between different actors and the temporal, spatial aspects of this relationship. Residents organise themselves to address everyday risks and the linkages they attempt to forge to gain visibility with the local authorities highlights the significant effort required to be seen and heard by the local authorities. This self-organisation of residents is constrained by a changing environment controlled by the local authority that decides how to govern informality and access to governmental resources.

Conceptually de-privileging the disaster continues to be an issue requiring attention. Disaster studies tended to focus on the event that lies at the heart of the explanatory frame. This is understandable. However it has led to an approach which begins with the event – the disaster – and then tracks or traces this back in time and outwards in space in order to understand the ‘root causes’ and ‘context’ within which the disaster concerned sits (Wisner et al, 2012; Wisner et al, 2004). Over the years, this has led to an increasingly nuanced understanding of the political economy of disasters. It still, however, privileges the disaster as an event on the one hand, and plays down the role of the culture of everyday life on the other. This thesis approaches the ‘disaster’ very differently, with important implications for how it is framed and understood. The study begins with the everyday and seeks to understand how an event and its effects are shaped by cultures of living, rather than vice versa. The study, therefore, seeks to de-privilege the disaster so as to reveal the spaces of explanation that occupy the spaces that lie between and around the events. In this way, the study contributes to how disasters have come to be understood in the social sciences. I am not arguing to ignore natural hazards; rather I argue for centering urban residents such as respondents from wards 4 and 11, (as a cross section of residents of an ordinary medium sized city) in discussions of urban risks and hazards. Discussion can be furthered in which efforts on multiple scales and on multiple issues such as disaster risk reduction and everyday concerns such as employment and economic security can be considered jointly rather than separately.

Expert knowledge in relation to people’s knowledge of risk continues to cause concern. Bankoff et al (2015, 7) proposes that there are “gaps between what ‘outsiders’ consider disaster risks to be and the very different ways that risks are

perceived, understood and dealt with by ‘insiders’, in their culture at the ‘community level’. Bankoff (2003) suggests that there is often not a separation between environmental degradation, poverty, marginalisation, and hazards in the lives of people burdened with difficult lives and problematic natural environments where natural hazards have a tendency to occur. Different understandings of risk between residents and experts have been extensively researched and documented in the past two decades (Barber et al, 2008; Lavigne et al, 2008; Wisner et al 2004; Buckle et al, 2003). Despite this, experts including the IAC have not learnt how to work differently and there continues to be a surprise that people are not listening to experts. Experts may need to consider listening to people and their perception of risk and thus engaging on terms that urban residents in the global South can relate to. The necessity to incorporate everyday risk perception and hazard perception, combining socio-cultural and economic factors is clear (Bankoff, 2003). The continuing inability by the IAC to consider disaster risk reduction and development issues together highlights that many have not learnt this message.

The final contribution of this research relates to policy and practice. Understanding how the international aid community is utilising the concept of resilience has been brought to the fore through this thesis. The international aid community’s ambivalence towards the concept of resilience that is framing their work is discussed. While the international aid community is utilising disaster community resilience in two distinct ways (as a bridging mechanism for their work and as a project management tool) in Nepal, the struggle they face in project implementation reflects the fact that their DRR priorities frequently do not match the priorities of people. Through the interrogation of disaster resilience, a call for the IAC to listen to residents in cities and their perception of a wide range of risks is argued through this research.

8.3 Evaluating approach taken

This research has shown the value of undertaking an intra-urban comparison to understand the breadth and depth of risk perceptions from the perspective of residents in a rapidly urbanising city. Residents in different parts of the city view risks in different ways based on their location in the city and their own personal

characteristics. The qualitative methodology utilised in this project include semi-structured interviews, focus group discussions and photographs. This research project engaged on multi scales. Views from the local level include interviews with local authorities and municipal leaders such as nurses, head teachers and business associations provided the context and general understanding of urban risks and hazards and were incorporated into the research analysis. The central level government officials, NGOs and the international aid community provided a rich and nuanced understanding of the environment created and influenced by scales which are not local.

Through this research project, I have learnt the necessity to understand the rapidly changing environment. If I had the opportunity to become embedded in the community groups, I believe I would have had a richer understanding of how different urban groups function and the power struggles they engage in. The role of the international migrants in transferring knowledge to residents in this research has not been adequately addressed. Economic needs and individual strategies for coping are also not extensively researched in this project. If I could start the research project again, I would have focused more on the mechanisms through which people learn new ways of living in the city and how this impacts the urban in Nepal. I discovered that both women and men learnt new ways of living and behaving in the city from participation in community groups (especially women's groups), donor implemented projects, and from family members living abroad or from their own participation in international migration. This is relevant because these particular individuals were at the forefront of making the city better for themselves, their families and communities.

8.4 Looking into the future

In Nepal, the last municipal elections were in 1997. In 2002, the prime minister dissolved all local elected bodies and subsequently dissolved national parliament. Later in the year, King Gyanendra suspended the democratic processes. From 2002 onwards, decisions were made by central government employees in Bharatpur (who were periodically transferred to other locations within the city or to other cities) as well as by local politicians, predominately the higher caste groups in Bharatpur.

Byrne and Shrestha (2014, 437) argue that the “uncertainty and confusion of local government authority leave, and indeed require, much room for compromise in the relationships between and among local government officials and local politicians. Compromise is a way of making things work when rules are unclear or impracticable and authority is contested”. This opaque environment where residents are not considered relevant to local level decision making is strongly contested by some respondents. An elderly man in ward 11 who fled his village during the civil conflict ten years ago succinctly explains:

“Even an illiterate person would be a better representative of the people because he is elected by the people. People can go pressurise him to implement things and people will feel ownership by telling him their problems. Nowadays, these government officials just work as civil servants and work for the government, not the people”.

Local officials informally concur that the way the municipality and now the SMCB functions – satisfying the central government and its mandate as well as the mandate of political parties - results in unaccountability to the people of Bharatpur. Local authorities informally explain that the accountability of the CEO is to the central government and to politicians. In that sense, residents are not important to the government. A key government official states, “the CEO is in control; there is no mayor since there are no elections”. Residents in both wards 4 and 11 express a desire for local municipal elections, they long for a political system they can influence and through which they can hold elected officials to account. Byrne and Shrestha (Ibid, 447) in their local government research in post-conflict Nepal reported similar findings, “Most of our respondents indicated that an elected local government would be much preferable to the current situation because then at least someone will have the proper authority to take decisions”.

Some key informants in the intra-urban comparison wards (including the President of the Citizens Village Tole) expressed a desire to influence the local authority directly through voting in local elections rather than the current system of informally engaging with the local government via TLOs. This is due to the likelihood of these informal governance mechanisms, the TLOs, losing their level of influence after the earthquake and the central government’s renewed pressure to formally implement urban planning and the NBC. The key concern is that people will no longer have a

voice or a link to the local authority. They are also aware of the temporality of the TLOs. The government can decide at any point to sever relations with the TLOs thus rendering TLOs without any recourse to get their collective needs heard by the local authorities. Residents recognise multi-level governance is required to manage the range of perceived risk in the urban thus they want to be included in the discussions and decision-making processes.

In three recently created macro regions, local elections took place on May 14, 2017 and in the other four newly created macro regions, local elections will take place on June 14, 2017. Change is in the air. In an environment where local elections are taking place in Nepal after an absence of twenty years, informality of the local authority and the way it manages relationships with residents and community groups will change. How this change will manifest itself requires investigation. Will the new form of local government have the desire to and will they be able to make effective risk governance links with elements of society ignored until now? How the city will change after local elections warrants investigation: will the elected officials engage with all residents and their perceived risks or will large segments of society continue to be ignored in the new local governance environment? These are important research questions to consider in relation to Nepal post 2017.

This research showcased the dynamic interactions occurring within and between scales (Cumming et al, 2006). These scales comprise the household, community, local authority, national level and lastly the international level (through the international aid community). “The micro politics of everyday life” (Mohanty 2003, 508) and the larger more global processes that influence the everyday have been explored. While the local scale is important, there is a “need to deal with institutionalized power relations above the level of the settlement” (Dodman and Mitlin 2013, 651). When events occur on scales above the household and community, they have the potential to deepen or worsen everyday uncertainties and risks associated with everyday living, and impact upon coping strategies. The city is being reconfigured by events and the relationship between events and the everyday in ways that are not immediately visible to the residents. I argue that further and a deeper understanding of the relationship between urban residents and the local

authority is important for understanding risk perception and governance in urban areas. Urban governance structures shape perceptions of risk, how to manage risk and how to respond to a range of perceived risks. An implication for future research is the necessity to consider the relationship between the IAC and national governments, people, risk management, informality and how to create a space in the policy sphere to make urban residents' priorities matter to the IAC.

It is critical to continue to interrogate how urban dwellers define their communities, how they define components of resilience, and how and if this can be supported but not necessarily assessed by the IAC. If cities and communities within them are to enhance their resilience (or be more than resilient) within the everyday, to an event, a natural hazard or specifically a seismic hazard then power issues need to be considered. Only by asking questions such as “whose resilience is important?”, “resilience to what?”, “whose lens is being used to discuss resilience?”, “who impacts resilience?”, only by asking and understanding the power relations, the range of scales involved and the intersectionality between those scales, can resilience be used as a concept by the IAC to benefit those who need to be more than ‘resilient subjects’ (Evans and Reid, 2013). Research into power dynamics and how to make a space for more effective linkages between urban residents and the desires of the IAC is warranted.

Wisner et al (2004, 345) propose good governance encompasses cultural, political, social and economic spheres and is not only a: “Technical matter of free and fair elections, decentralization and audits, but ... a term that covers the ideologies, power relation[s], formal and informal networks, and resource flows that determine the relationship between the state (at various levels: national, sub-national, local/municipal) and civil society”. In addition to local and national risk governance structures that are in place, there are also broader international institutional arrangements of relevance in Nepal. Carabine et al (2016) suggest a risk governance system that involves a diversity of institutions; a system that engages local communities in a meaningful way is more relevant to residents than a system that utilises a narrower range of knowledge bases. Considerations of how international risk governance systems should more fully integrate urban residents' knowledge and

perceptions requires further reflection and interrogation in a changing urban risk environment.

Reflecting on differing interpretations of hazards and risks in the everyday and in other temporal and spatial scales can allow for an enriched understanding of how risk is understood in ordinary cities in the world as well as in other post-conflict, multi hazard prone countries. The relationship between culture and risk in relation to disasters, climate change and other less frequently occurring events is, according to Hewitt (2012, 94), “woven into the fabric of everyday life” and should not be artificially separated. This is my argument. The interconnectedness between everyday life and events occurring at multiple and various scales needs further exploration. There is no body of literature that fully addresses this range of risk perceptions in the urban. For the research landscape, there continues to be an opportunity to address this grounding of the everyday at the centre of debates surrounding the breadth and depth of urban risk.

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Appendices

Appendix A Profile of respondents to NSET's BCIPN Risk Perception Survey

Appendix B Difficulties encountered with utilising the BCIPN Survey

Appendix C Demographics of the 23 key respondents in Wards 4 and 11

Appendix D Description of the 23 key respondents from Wards 4 and 11

Appendix E Interviews conducted during the five fieldwork trips

Appendix F Questions asked during the five fieldwork trips

Appendix G Consent Form

Appendix H 23 key informants, description and location in city

Appendix I Codes hierarchy future, December 2015

Appendix J Codes hierarchy everyday risks February 2016

Appendix K My blogs post earthquake

Appendix A Profile of respondents to NSET's BCIPN Risk Perception Survey

The most frequent occupations for BCIPN survey respondents:

	Total sample	Business	Student	Housewife
Total for all Wards	1700 ⁸	Business 516	Student 423	Housewife 358
Ward 4	215	Business 85	Student 37	Housewife 45
Ward 11	331	Business 45	Student 100	Housewife 92

- The range of occupations included: private organisation, government, student, politician, daily wage labourer, housewife, unemployed, free lancer, business and other.

The most frequent income levels for BCIPN survey respondents:

	Total sample	< 10,000 NR per month	10,000 – 20,000 NR per month	20,000 – 30,000 NR per month
Total for all Wards	1700	244	787	401
Ward 4	215	51	50	35
Ward 11	331	51	165	33

- The range for income levels was from 0 to over 100,000 NR per month.
- Of the 69 respondents who earned nothing per month, 11 were in ward 4 and 30 were in Ward 11.
- Of the 45 respondents who stated they earned 50,000 – 100,000 NR, 17 were in Ward 4 and 12 were in Ward 11.

The most frequent education levels for BCIPN survey respondents:

	Total sample	Primary	Secondary	Higher Secondary	Graduate and above
Total for all Wards	1700	329	497	562	76
Ward 4	215	48	76	44	0
Ward 11	331	0	80	104	52

- Of the 109 people who identified as illiterate, 26 were located in Ward 11. Ward 11 also had the largest number of graduate and above level (above).

⁸ I deleted 69 due to incomplete data cells

The most frequent age brackets for BCIPN survey respondents:

	Total sample	18-30 years old	31-40 years old	41-50 years old
Total for all Wards	1700	617	558	305
Ward 4	215	72	57	39
Ward 11	331	157	63	53

- The survey was targeting adults, it is not surprising there are few under 18 years old and there are also few individuals interviewed over 60 years of age.

The most frequent number of members in household for BCIPN survey respondents:

	Total sample	4 members in household	5 members in household	6 members in household
Total for all Wards	1770	421	413	268
Ward 4	215	49	53	28
Ward 11	331	85	73	56

- There was a wide range in number of members of household. From 3 members to 9 was the general range with some large outliers.

Appendix B Difficulties encountered with utilising the BCIPN Survey

In wards 4 and 11 combined, we interviewed 16 out of 165 potential BCIPN survey interviewees contacted. Our success rate in finding interviewees from the BCIPN survey was 9% after much effort.

Challenges encountered include the following:

- Few telephone landlines were in use.
- Mobile phone was switched off (or no longer in use).
- People had migrated.
- People changed their mobile phone numbers regularly, especially youth (due to telephone provider contract rates).
- Women gave their husband's mobile numbers, the husbands did not know about the survey.
- It was difficult to find men who had the extreme ends of income (no income and also the 50,000 – 100,000 Nepalese rupee per month (£440-880)).
- It was extremely difficult to find female students.
- There were discrepancies in stated income levels; people did not consider pensions (from army) as income thus real income levels were higher. Remittances were also not included thus real income levels were higher.
- It was extremely difficult to physically locate people. Due to lack of street names and numbering of houses and most people's inability to communicate where they lived, it took long periods of time to find respondents.

Appendix C Demographics of the 23 key respondents in wards 4 and 11

	Number		Number
Gender		Education	
Female	8	Primary	9
Male	15	Secondary	5
		Higher secondary	7
Ward		Graduate	2
Ward 4	12		
Ward 11	11	Caste, ethnicity, indigenous	
		Brahmin or Chetri	14
Employment		Newari	4
Daily wage labourer	1	Ethnic	1
Unemployed	1	Muslim	2
Retired	3	Indigenous	2
Student	3		
Housewife	7	House ownership status *	
Businessman	8	Homeowner	17
		Renter	6
Age			
< 18	3	Length of residency in Bharatpur *	
18 – 30	2	Long term (20 or more years)	12
31 – 40	9	Middle (10 – 20 years)	4
41 – 50	4	Newcomer (less than 10 years)	7
51 – 60	4		
61 – 70	0	Global connection, not necessarily remittances *	
> 70	1	Had a link	12
		Had no connection	11
Income NR per month			
0	6	Found via BCIPN survey	
< 10,000	5	Yes	16
10,000 – 20,000	5	No	7
20,000 – 30,000	2		
30,000 – 50,000	2	* not a criteria in the BCIPN survey	
50,000 – 100,000	2		
> 100,000	1		

Appendix D Description of the 23 key respondents from wards 4 and 11

Profile	Gender	Ward	Occupation	Age	Home Owner / Renter	Religion, caste, ethnic group *	Income per month NR	Length of time in city **	Education	Global Link	From BCIPN survey
15 answered questions about everyday risks and what will help keep you safe for the future											
Female Shopkeeper	F	4	Housewife	31-40	R	B	< 10,000	NC	Primary	N	Y
Birgunj Shopkeeper	M	4	Businessman	31-40	R	B	10,000 - 20,000	NC	Higher Secondary	N	Y
Alam	M	4	Businessman	31-40	R	M	< 10,000	LT	Primary	N	Y
Nani Maya	F	4	Housewife	41-50	HO	N	10,000 - 20,000	Middle	Secondary	Y	Y
Hotel owner from EU	M	4	Businessman	31-40	R	C	30,000 - 50,000	LT	Higher Secondary	Y	N
Young car washer	M	4	Daily wage labourer	< 18	HO	E	<10,000	LT	Primary	N	Y
Hari Prasad	M	4	Businessman	51-60	HO	B	>100,000	LT	Higher Secondary	Y	Y
Ram Prasad	M	4	Retired	51-60	HO	B	30,000 - 50,000	NC	Secondary	Y	N
Ward 10/11 retired army officer	M	11	Retired	> 70	HO	C	10,000 - 20,000	LT	Primary	Y	Y
Ward 11 Housewife on Jungle Road	F	11	Housewife	31-40	HO	C	< 10,000	Middle	Primary	N	Y
Narayan	M	11	Businessman	31-40	HO	B	10,000 - 20,000	NC	Secondary	N	Y
Prem	M	11	Businessman	41-50	HO	B	10,000 - 20,000	Middle	Primary	Y	Y
Laxmi	F	11	Housewife	41-50	HO	B	<10,000	Middle	Primary	Y	Y
Shankar	M	11	Unemployed	31-40	HO	I	0	LT	Primary	Y	Y
Ward 11 University student	F	11	Student	18-30	HO	N	< 10,000	LT	Graduate and above	N	N

Profile	Gender	Ward	Occupation	Age	Home Owner / Renter	Religion, caste, ethnic *	Income per month NR	Length of time in city **	Education	Global Connection	From BCIPN survey
2 answered questions related to everyday risks but not future oriented questions											
Female Social Activist	F	4	Housewife	31-40	HO	N	20,000 - 30,000	NC	Higher secondary	N	Y
Ward 11 Wife of Kumal migrant worker	F	11	Housewife	31-40	HO	I	0	LT	Primary	Y	N
6 answered questions related to what will help keep you safe for the future but not everyday risks questions											
Rita Devi	F	4	Housewife	51-60	HO	C	20,000-30,000	LT	Secondary	Y	Y
Birgunj Shopkeeper's son	M	4	Student	<18	R	B	0	NC	Higher secondary	N	N
Alam's son	M	4	Student	<18	R	M	0	LT	Secondary	N	N
Ward 11 Former Ministry official businessman	M	11	Businessman	51-60	HO	N	50,000 - 100,000	LT	Graduate and above	N	Y
Ward 11 Construction supply shop	M	11	Businessman	18-30	HO	B	50,000 - 100,000	LT	Higher secondary	Y	N
Ward 11 Home owner from BCIPN survey	M	11	Retired	41-50	HO	B	0	NC	Higher secondary	Y	Y

* B = Brahmin, C = Chetri, I = Indigenous, M = Muslim, N = Newari. ** LT = Long term resident arrived 30 years or more, Middle = arrived 15 – 20 years ago, NC = Newcomer arrived less than 7 – 10 years ago (after 2008)

Appendix E Interviews conducted during the five fieldwork trips

Description and purpose of fieldwork trips

Location	Dates	Purpose
Kathmandu Valley and Pokhara, Nepal scoping trip	November 30 - December 13, 2013	Disseminate Master by Research findings to national and local government officials as well as international aid practitioners Explore possible partner relationships and possible fieldwork sites in Kathmandu Valley and Pokhara
Bihar State, India scoping trip	June 7 – 21, 2014	Investigate the possibility of conducting fieldwork in urbanising Bihar State, India
Bharatpur, Nepal and Kathmandu	November 2 – December 7, 2014	Explore what my intra urban comparison would be for the research. Understand the context for enhancing earthquake resilience in urbanising cities
Kathmandu and Bharatpur Nepal and Patna, India	April 8 – May 2, 2015 (fieldwork interrupted by Gorkha earthquake)	Participate in EwF Project's nine country conference, fieldwork in Bharatpur and sharing of learning from earthquake experience with Indian EwF colleagues, evacuation from Nepal
USA	August 11, 2015	Interview IAC
Bharatpur, Nepal and Kathmandu	September 5 – October 8, 2016	Continue fieldwork exploring everyday risk perception and what helps people to be safe in the future
Kathmandu and Bharatpur Nepal	Expected Autumn 2017	Disseminate PhD research findings to national government and local authorities

PhD Nepal Scoping Trip

November 30 – December 13, 2013

Log of 23 meetings, 30 people, one symposium. One fieldtrip to Pokhara with 8 site visits (not included as meetings)

PhD India Scoping Trip

June 7 – 21, 2014

Summary

	Individual Meetings	Institutions
Government	12	9
Partners / Practitioners	11	10
Total	23 *	19

*Did not count Mason and World Bank

	Focus groups	
Communities	9 (Rural 7 / Urban 2)	Visited Rural 7 / Urban 4
Students (School Safety)	2 groups	
Total	11	

**Bharatpur, Nepal PhD Fieldwork
November – December 2014**

56 interviews and 6 focus group discussions

Government 12 meetings

Bharatpur Municipal officials 7
 Chief Executive Officer
 Earthquake Section
 Fire-fighters
 Building Permit Section
 Information Officer
 Social Welfare Officer
 Environmental Officer
Ward Secretaries 3
 Ward 3/4
 Ward 5
 Ward 11
District 1
 Disaster Risk Reduction focal person
Mangalpar VDC 1

NGOs /INGOS 6 meetings

1. NSET (BCIPN)
2. National NGO
3. INGO
4. Nepal School of Social Work
5. Nepal Red Cross
6. UN Agency

Business 7 meetings

1. Association of Chitwan Construction Service Union
2. Bharatpur Building Construction Enterprise Association
3. Association of Engineers
4. 3 masons from Bihar
5. 3 masons from Bharatpur
6. 3 masons from Chitaban (5 day BCIPN training)
7. Consultant engineer

Education 3

1. Polytech
2. Private school
3. Secondary school part of the private school

Key informants on municipal level 5 meetings

1. Radio
2. Politician
3. 2 Nurses

4. 2 women's groups in Ward 5
5. Home owner in Ward 10

Ward 11 meetings 12

1. Long term older resident
2. Young nurse
3. Female New Home Owner trained by BCIPN
4. Teacher New Home Owner trained by BCIPN
5. Young man New Home Owner's son (slum dweller) trained by BCIPN
6. 8 retired men under the tree
7. 2 young women at a shop in Burma tole
8. Construction company
9. INGO / NGO slum dwellers Women's group
10. INGO / NGO slum dwellers Tole
11. 3 tole presidents
12. New Home Owner trained by BCIPN
13. Tole Focus group (DID NOT COUNT HERE)
14. Tole Focus group (DID NOT COUNT HERE)
15. Ward Secretary (DID NOT COUNT HERE)

Ward 3/4 10 meetings

1. Ward 3 Electrical repair man
2. Ward 3 Mattress maker
3. Ward 4 Business man
4. Ward 4 Poultry worker
5. Ward 4 Snack Shop owner
6. Ward 4 Community activist
7. Ward 4 Plastics company owner
8. Ward 4 New Home Owner
9. Ward 4 New Home Owner trained by BCIPN at his home
10. Ward 4 New Home Owner trained by BCIPN at his home
11. Tole Focus group Citizens Village (DID NOT COUNT HERE)
12. Ward Secretary (DID NOT COUNT HERE)

Mangalpur 1

1. Nepal Red Cross project

Focus groups 6

Masons trained by BCIPN (3 people involved in focus group)
 BCIPN staff members (4 people involved in focus group)
 Ward 11 Tole Development Committee (9 participants)
 Ward 4 TLO Citizens Village (7)
 Ward 11 TLO (7)
 Mangalpur VDC Ward disaster project

**Bharatpur, Nepal PhD Fieldwork
April – May 2016**

Summary of interviewees Bharatpur and Bihar, India

Bharatpur

Formal interviews taped:

Ward 4

1. Widow / poultry business-woman
2. Shopkeeper woman
3. Birjung Shopkeeper and son
4. Bike shop owner and his son
5. Housewife on New Road
6. Nepalese Hotel Owner from EU
7. Young male car washer
8. Female Social Activist
9. Brahmin recycling owner

Formal interviews but not taped:

1. Nepalese UK Camden Businessman
2. Bihar vegetable seller
3. Nepalese Renters Informal Settlement Ward 4
4. Earthquake resistance, Municipality

Informal discussions:

1. Hotel Manager
2. 15 tent dwellers
3. Family of BCIPN HO New Road
4. Citizens Village tole President

Focus group:

1. Women's group Ward 4

Patna, Bihar State India May 2015

BSDMA

Task Force for earthquake

UNICEF

**Bharatpur, Nepal PhD Fieldwork
September – October 2015**

Summary of interviewees in Bharatpur September 2015

	New respondent	Follow up	Total	
Individual	10	2	12	
Community	3	1	4	
SMC level or NGO	6	3	9	25 interviews
Focus group	4		4	4 focus groups

Formal interviews taped:

1. Ward 11 Retired Army officer Ward 10/11
2. Ward 11 Housewife on Jungle Road BCIPN
3. Ward 11 Male shopkeeper
4. Ward 11 Hospital Security Guard
5. Ward 11 Ministry of Industry Furniture business man
6. Ward 11 Kumal indigenous group migrant worker and wife
7. Ward 4 Tole presidents River bank tole and New Road tole
8. Ward 4 Social Mobiliser
9. Ward 11 Kumal community leader
10. Ward 11 University student
11. Ministry of Federal Affairs and Local Development

Formal interviews but not taped:

1. Hospital Guard's wife
2. Ward 11 House construction supply shop
3. Local Governance Expert MoFALD
4. Bharatpur Sub Metropolitan City Urban Development
5. Executive Officer Sub Metropolitan City Bharatpur
6. Ward 11 Secretary
7. Ward 11 Social Mobiliser
8. Mangalpar government official

Informal discussions:

1. Hotel General Manager
2. Dalit women being trained by Ward 4 Social Mobiliser

Focus group:

1. Women's group Ward 4
2. Lama Tole (village) Ward 11
3. Women's group River tole Ward 4
4. Mangalpar Community Disaster Management Committee

Follow up interviews:

1. Madhesi ethnic group
2. Red Cross Executive Committee for Nepal
3. Ward 3/4 Secretary
4. SMCB
5. Vehicle Businessman
6. Ward 4 Citizens Village Tole President

Other:

Four hour interactive event for Sub-Metropolitan City implementation of earthquake resistant homes

Constitution Rally

Youth Rally protesting Indian involvement in Constitution debate

Meetings in Kathmandu October 2015

	New	Feedback	Total
	8	2	10
Urban Task Force	7		

Meetings in Kathmandu:

1. Kathmandu Living Lab
2. Flagship 5
3. INGO
4. Lalitpur Ward 12 Secretary of Disaster Mgmt committee
5. NRRC
6. NSET
7. DFID
8. Flagship 4
9. Urban task force

Feedback in Kathmandu counted in meetings above:

1. NSET BCIPN
2. Flagship 4

Appendix F Questions asked during the five fieldwork trips

Questions for December 2013 Nepal Scoping Trip

1. How are the INGOs defining the concept of community in the urban area?
2. How do they decide if the urban setting is disaster resilient? What do they look for in a community in the urban setting. Can you assess if a community is disaster resilient BEFORE a specific disaster?
3. What are the key factors to create a disaster resilient community. Of the 9 characteristics, which are most important?

India Scoping trip June 2014

Themes I was addressing in my scoping trip to India include resilience, what is it and can it be operationalised, urbanization, community, earthquakes and disasters. There are issues related to agency, power, place and engrained ways of functioning (government and castes). I learnt about community based disaster risk reduction, groups, hazards such as flooding and earthquakes

November and December 2014

Interview with Municipality and VDC officials

Section 1 My introduction including ethical statement

THIS WILL BE DONE EITHER BY ME OR THE RESEARCH ASSSISTANT

My name, I am a postgraduate student at Durham University, and I am conducting my research in conjunction with the Earthquakes without Frontiers project from Durham University with support from NSET in Nepal. I am investigating the concept of Community Resilience. My research is unlikely to directly benefit the case study communities although I hope my research findings can be used to develop / materials which can support resilience building in Nepal. You can finish the interview when-ever you desire. You do not need to complete or answer any questions that you do not wish to answer. I will not identify people by name in my research document, I will provide anonymity. Do you have any questions about what I just explained? Can you please give me your opinions on the following questions and if you want to give me additional information, please do so.

Section 2 Questions for Municipality or VDC

General question about Municipality or VDC and urbanisation

1. How have things changed in your municipality (or VDC) over the last ten years (or other significant period)? (Social trends, economic, migration, education, health).
What has caused these changes?
2. Where is urbanization occurring?
3. Are there issues being faced due to urbanization?

Questions regarding Roles in DRR

1. What is the relationship between the municipality (or VDC), the district and the central government for DRR?
2. What is the role of the government in disaster risk reduction?
3. What is the role of the private sector in disaster risk reduction?
4. What is the role of individuals in disaster risk reduction?

Questions regarding earthquakes and other natural hazards

1. Which hazards are you most/least? concerned about and why? Which hazards are the focus of your disaster management plans? Why?
2. What is the relationship between vulnerability to frequent hazards such as floods and a rare high magnitude hazard such as an earthquake?
3. Should there be a law for safe and strong buildings? Should there be a law for earthquake resistant buildings? Critical infrastructure? Flats?
4. Should there be enforcement of law for construction of earthquake resistant buildings?
5. Whose role is it to protect housing from earthquakes? The municipality, the engineer, the developer, contractor or the owner of the building?
6. What is the role of the national and local government in DRR?
7. What are the links with informal governance structures?

Questions regarding the BCIPN

1. What would you like to achieve through the BCIPN? Why did you agree to participate? Can you describe the activities of the Building Code Implementation Program in Municipalities of Nepal (BCIPN)?
2. What issues have arisen? Successes? Challenges?
3. What have you learnt through the BCIPN? Has your understanding of EQ risk and EQ risk management changed? How? In your preparedness?
4. Does the municipality (or VDC) have new skills? Knowledge? Is there a change in daily practice? Long term planning in the local government?
5. Has earthquake risk been reduced?
6. Where is the impact of the project being felt?
7. *How does this impact resilience levels of different groups, communities and municipalities.*

Questions regarding Resilience

1. How is resilience understood at the community level?
2. From the point of view of the local community what are the characteristics or components of resilience? This can include: human, social/cultural,

economic/financial, political/institutional, natural/environmental and lastly physical infrastructure.

3. Do components of resilience vary between groups in society? In what ways?
4. How is resilience produced and enhanced in local contexts?
5. Can resilience also be enhanced or supported through external intervention?
6. What form(s) might this support or intervention take?
7. Are there any examples where the local government, NGOs, community groups and businesses work together?

Section 3 Closing interview

1. Is there anything else you would like to tell me? Or ask me any questions?
2. Is there anyone you think I should talk to?
3. Can I take photographs?
4. Thank you.

Interview with key municipal informants

Section 1 My introduction including ethical statement

THIS WILL BE DONE EITHER BY ME OR THE RESEARCH ASSSISTANT

My name, I am a postgraduate student at Durham University, and I am conducting my research in conjunction with the Earthquakes without Frontiers project from Durham University with support from NSET in Nepal. I am investigating the concept of Community Resilience. My research is unlikely to directly benefit the case study communities although I hope my research findings can be used to develop resources / materials which can support resilience building in Nepal. You can finish the interview when-ever you desire. You do not need to complete or answer any questions that you do not wish to answer. I will not identify people by name in my research document, I will provide anonymity. Do you have any questions about what I just explained? Can you please give me your opinions on the following questions and if you want to give me additional information, please do so.

Section 2 Questions

General questions about Municipality, working together, urbanisation

1. How have things changed in your municipality over the last ten years? (Social trends, economic, migration, education, health). What has caused these changes?
2. What are the main development challenges faced?
3. Does your municipality have community groups? If yes, how long have they been existing and what is their focus?
4. Are there any international / local NGOs working in your municipality? If yes, what is the focus of their activities? Are there other key actors involved in local development?
5. Are there examples where the local government, NGOs, community groups and businesses work together?
6. Where is urbanisation occurring?
7. Are there issues being faced due to urbanisation?
8. How does urbanisation impact resilience levels of different groups, communities and municipalities.

Questions regarding Resilience

1. How is resilience understood at the community level?
2. From the point of view of the local community what are the characteristics or components of resilience? This can include: human, social/cultural,

economic/financial, political/institutional, natural/environmental and lastly physical infrastructure.

3. What is most important for each of the 6 capitals? (I will show my list)
4. Do components of resilience vary between groups in society? In what ways?
5. How is resilience produced and enhanced in local contexts?
6. What is the role of formal and informal groups in enhancing resilience?
7. What is the role of government in enhancing resilience?
8. What is the role of outsiders, projects in enhancing resilience?

Questions regarding earthquakes

1. Are you doing anything to prepare for an earthquake? If yes, please give details. If no, why not?
2. Have you ever received information that could help you prepare for and react to an earthquake? If yes, what was source of information (children, media, theatre)? What was the information?
3. Should there be a law for safe and strong buildings? Should there be a law for earthquake resistant buildings? Critical infrastructure? Flats?
4. Should there be enforcement of law for construction of earthquake resistant buildings?
5. Whose role is it to protect housing from earthquakes? The municipality, the engineer, the developer, contractor or the owner of the building?
6. What is the role of the national and local government in DRR?
7. What are the links with informal governance structures?

Section 3 Closing interview

1. Is there anything else you would like to tell me? Or ask me any questions?
2. Is there anyone you think I should talk to?
3. Can I take photographs?
4. Thank you.

Interview with Residents

Section 1 My introduction including ethical statement

THIS WILL BE DONE EITHER BY ME OR THE RESEARCH ASSSISTANT

My name, I am a postgraduate student at Durham University, and I am conducting my research in conjunction with the Earthquakes without Frontiers project from Durham University with support from NSET in Nepal. I am investigating the concept of Community Resilience. My research is unlikely to directly benefit the case study communities although I hope my research findings can be used to develop resources / materials which can support resilience building in Nepal. You can finish the interview when-ever you desire. You do not need to complete or answer any questions you do not want. I will not identify people by name in my research document, I will provide anonymity. Do you have any questions about what I just explained? Can you please give me your opinions on the following questions and if you want to give me additional information, please do so.

Section 2 Questions for Residents

Questions related to resilience and hazards including earthquakes

1. In your day-to-day life, what are the main challenges that you face and what are your main concerns or worries?
2. Which hazards most concern you? (floods, fires, earthquakes, others such as ?)
3. How do you cope with difficult changes, crisis in your life? Who do you turn to if you need help?
4. Have you experienced an earthquake? Can you give details? When, impact? Were you in a building?
5. Do you know what causes an earthquake to occur?
6. Are earthquakes a concern for you and your household?
7. Are you doing anything to prepare for an earthquake? If yes, please give details. If no, why not?
8. Have you ever received information that could help you prepare for and react to an earthquake? If yes, what was source of information (children, media, theatre)? What was the information?
9. Should there be a law for safe and strong buildings? Should there be a law for earthquake resistant buildings? Critical infrastructure? Flats?
10. Should there be enforcement of law for construction of earthquake resistant buildings?
11. What is the role of the national and local government in DRR? (I asked this question only if they were aware of how government worked)

12. What are the links with informal governance structures?
13. Whose role is it to protect housing from earthquakes? The municipality, the engineer, the developer, contractor or the owner of the building?
14. Which components are important to your resilience? This can include: human, social/cultural, economic/financial, political/institutional, natural/environmental and lastly physical infrastructure. (I will use circles)
15. What is most important for each of the 6 capitals? (I will show my list)

Section 3 Closing interview

1. Is there anything else you would like to tell me? Or ask me any questions?
2. Is there anyone you think I should talk to?
3. Can I take photographs?
4. Thank you.

Interview with Donors and Practitioners

Section 1 My introduction including ethical statement

My name, I am a postgraduate student at Durham University, and I am conducting my research in conjunction with the Earthquakes without Frontiers project from Durham University with support from NSET in Nepal. I am investigating the concept of Community Resilience. You can finish the interview when-ever you desire. You do not need to complete or answer any questions you do not want. I will not identify people by name in my research document, I will provide anonymity. Do you have any questions about what I just explained? Can you please give me your opinions on the following questions and if you want to give me additional information, please do so.

Section 2 Questions

Questions focusing on Resilience, Community Resilience initiatives in Nepal

1. What is the main focus of your organisation and the work that you do?
2. Do you use the term resilience in your work? If yes, how? If no, why not? Is it useful as a concept?
3. How do you define resilience? Has your definition changed over time?
4. How do you view the term resilience in relation to vulnerability, livelihoods, natural hazards, individual, community, Disaster Risk Reduction?
5. Can you describe your portfolio of disaster resilience projects?
6. How is resilience understood at the community level?
7. From the point of view of the local community what are the characteristics or components of resilience?
8. Do understandings of resilience vary between groups in society? In what ways?
9. How is resilience produced and enhanced in local contexts?
10. Can resilience also be enhanced or supported through external intervention?
11. What form(s) might this support or intervention take?

Questions regarding urbanization

1. *What are the issues being faced in urbanization? Where is urbanization occurring?*
2. *How does this impact resilience levels of different groups, communities and municipalities?*

Questions regarding earthquakes and other natural hazards

1. What is the relationship between earthquakes and other hazards in Nepal?
2. Where should the emphasis be placed?
3. What is the relationship between vulnerability to everyday hazards and a rare high magnitude hazards such as an earthquake?
4. What is the role of government in disaster risk reduction?
5. What is the role of private sector in disaster risk reduction?
6. What is the role of individuals / communities in disaster risk reduction?

Section 3 Closing interview

1. Is there anything else you would like to tell me? Or ask me any questions?

2. Is there anyone you think I should talk to?
3. Can I take photographs?
4. Thank you.

Focus group discussion

Section 1 My introduction including ethical statement

THIS WILL BE DONE EITHER BY ME OR THE RESEARCH ASSISTANT

My name, I am a postgraduate student at Durham University, and I am conducting my research in conjunction with the Earthquakes without Frontiers project from Durham University with support from NSET in Nepal. I am investigating the concept of Community Resilience. My research is unlikely to directly benefit the case study communities although I hope my research findings can be used to develop resources / materials which can support resilience building in Nepal. You can finish the group discussion when-ever you desire. You do not need to complete or answer any questions you do not want. I will not identify people by name in my research document, I will provide anonymity. Can you please give me your opinions on the following questions and if you want to give me additional information, please do so. Do you have any questions about what I just explained? I hope this will not use more than one hour of your time.

Section 2 Focus group discussion questions

A. Hierarchy of hazards and worries

1. In your day-to-day life, what are the main challenges that you face and what are your main concerns or worries?
2. Which hazards most concern you? And why? (floods, fires, earthquakes, others - such as ?)

B. RESOURCES TO SHOCKS AND STRESSORS

1. Which components are important to your capacity to deal with SHOCKS AND STRESSORS? This can include: human, social/cultural, economic/financial, political/institutional, natural/environmental and lastly physical infrastructure. (I will use circles for the different capitals)
2. What is most important for each of the 6 capitals? (I will show my list)
3. What is within your control?
4. What is outside of your control?

Other questions that might arise:

1. Which RESOURCES are most important for addressing/responding to everyday challenges faced? compared to a hazard situation?
2. Which RESOURCES are most important for addressing/responding to a hazard situation?
3. How can your resilience be enhanced?

Section 3 Closing focus group discussion

1. Is there anything else you would like to tell me? Or ask me any questions?
2. Is there anyone you think I should talk to?
3. Can I take photographs?
4. Thank you.

Questions changed during fieldwork

Residents

Which hazards are most important to you?

Earthquakes

What is your awareness of earthquakes?

Where have you heard about them?

What is the best way to strengthen community resilience to earthquakes?

Awareness to EQ

Do's and don't

Should there be a law for safe and strong buildings? Should there be a law for earthquake resistant buildings? Critical infrastructure? Flats?

Should there be enforcement of law for construction of earthquake resistant buildings?

Whose role is it to protect housing from Eqs?

The municipality, the engineer, the developer, contractor or the owner of the flat?

Social Capital

How do you deal with everyday concerns?

Who do you rely on in everyday? In time of crisis?

Whose responsibility is it to protect you in a disaster such as an EQ?

Government

What role does government play in strengthening your security to earthquakes?

What role do you play?

Social, economic factors,

Natural and physical characteristics

Municipality and other government departments

What changes have you seen in the last 20 years, 5 years? What are the trends?

What are the migration patterns?

Level of informal settlements

Bharatpur April – May 2015

For this trip, I have considered themes I would like to explore in detail with the interviewees. I would like to develop a deeper understanding of the components of the various resources (economic, social / cultural, human, government / political, physical infrastructure and lastly the environment); there maybe other issues that respondents think are as important or more important. I will focus my questions on what people think will keep them safe for the future and how the various capitals interact with each other. I have not prepared a detailed list of questions for this trip.

I will focus on the following themes:

- Background questions related to family structure, length of time in Bharatpur, clarify personal information from the survey (members of household, education, income, occupation) and their views related to the perceptions survey.
- How interviewees perceive and understand the risks they face
- Economic profile: role of remittances, sources of income and savings
- Social / cultural profile: who do they rely on, relationships with extended family, relationships with others including community groups, informal groups
- Human profile: related to background questions
- Government and political: relationship with the government, organisation of people on a local level, how do they communicate with the government, role of the government in keeping people safe for the future
- Physical infrastructure: status, expectations for the future, responsibilities
- Environment: hazards, risks they perceive and face, understandings of earthquake risk, flood risk

Respondents of the BCIPN Questionnaire

BCIPN

Impressions of the survey, was it useful

Which hazards worry about, past experience

Way to disseminate information (TV, radio)

Individual / community / government

How long live in Bharatpur? (members in household, work –education, extended family, how earn money, remittances, any one abroad, when build house? Renters?

Changes in Bharatpur, Profile of Area

Social capital family, neighbours, extended family, social groups

TLOs – engage with it?

Women's groups Monthly contribution, composition, how long functioning, purpose groups are most important, women's, TLO, youth, religious, political

New comers? Integrated? How

Relationship with government

Recommendations to government on how to communicate with people, how to strengthen links with people

Everyday worries and safety for future risk perception

Daily, what are your most important worries

Future, what keeps you safe for the future

New comers

Where from, when moved, why, extended family, how earn money, remittances?

Social capital? How fit in

What practices did you bring to Bharatpur

How maintain relationship with your former home?

Sub metropolitan city, urban planning and earthquake resistant construction

How has flood hazard and the five new VDCs changed disaster perception

Relationship between Bharatpur's disaster management plan and district's disaster management plan

Status of National Building Code

Sendai how changed your view of DRR, role of government, INGOs, how influenced your work

Formal stages of planning

What is the ward citizen forum? Ward management group?

Map of new vdc's?

September – October 2015 after the earthquake

Respondents of the BCIPN Questionnaire

BCIPN

Impressions of the survey, was it useful

Which hazards worry about, past experience

Way to disseminate information (TV, radio)

Individual / community / government

How long live in Bharatpur? (members in household, work –education, extended family, how earn money, remittances, any one abroad, when build house? Renters?

Changes in Bharatpur, Profile of Area

Social capital family, neighbours, extended family, social groups

TLOs – engage with it?

Women's groups Monthly contribution, composition, how long functioning, purpose groups are most important, women's, TLO, youth, religious, political

New comers? Integrated? How

Relationship with government

Recommendations to government on how to communicate with people, how to strengthen links with people

Everyday worries and safety for future risk perception

Daily, what are your most important worries

Future, what keeps you safe for the future

New comers

Where from, when moved, why, extended family, how earn money, remittances?

Social capital? How fit in

What practices did you bring to Bharatpur

How maintain relationship with your former home?

SBC of Bharatpur

Urban planning, earthquake resistant construction department

How has earthquake changed disaster perception

Has earthquake changed the way the municipality views hazards, disaster?

Has earthquake changed relationship between central government and municipality?

Has municipality's relationship changed with its residents after the earthquake?

What is relationship between Bharatpur Disaster management plan and the district disaster management plan?

Status of NBC

Sendai- how has participation in Sendai changed your view of DRR, Government, INGOs, how is it influencing your work

How has sub metropolitan status changed things?

How has five new VDC changed things?

How different is the city now?

Formal stages of urban planning

Hazard portfolio, How has flood 5 VDCS changed disaster perception

New map? New VDCs, new Wards, Population

CEO of SMCB

Sendai- how has participation in Sendai changed your view of DRR, Government, INGOs, how is it influencing your work

Sub metropolitan label – what implications are there for your work, impact with relationship with people

Hazard portfolio, flood / EQ new VDCs

Residents different needs (Bihar)

How should government work with people

Has earthquake changed the way the municipality views hazards, disaster?

Has earthquake changed relationship between central government and municipality?

Has municipality's relationship changed with its residents after the earthquake?

What is relationship between Bharatpur Disaster management plan and the district disaster management plan?

NBC?

People's expectations of the government post earthquake

Minimum conditions performance measures

What would you like the MFALD to do for you? to help prepare city for hazards?

Ward Secretary

Do foreigners register, do you know how many there are? Flow of residents?

Ward citizen forum? Who creates it, what purpose, how often meet?

Community groups, women's groups, TLOs

Local disaster management plan

Your role in the earthquake

Has the earthquake changed the ward

Remittances

Abroad

New Wards

What is relationship? How has integration changed the municipality

Are you getting more or else resources

General questions for local government staff

Sub metropolitan label – what implications are there for your work, impact with relationship with people

Has earthquake changed the way the municipality views hazards, disaster?

Has earthquake changed relationship between central government and municipality?

Has municipality's relationship changed with its residents after the earthquake?

How should government work with people

NBC?

People's expectations of the government post earthquake

Minimum conditions performance measures

What would you like the MFALD to do for you? to help prepare city for hazards?

Environmental department of SMCB

New wards – environmental influence of floods

How has the Earthquake changed the way in which the municipality functions?

Hierarchy of hazards

What is relationship between Bharatpur Disaster management plan and the district disaster management plan?

Renewed awareness

Land use planning / forward thinking

Social Department of SMCB

Community mobilisers?

New wards,

Bihar migrants

Slum dwellers

Community groups, association of mother's groups, provision to register groups

September – October 2015 after the earthquake

Questions for other respondents

Nepal Red Cross

Project

VDC now in muni

Red cross volunteers

Relationship with municipality

Disaster management planning

EQ

Sub metropolitan label – what implications are there for your work, impact with relationship with people

Has earthquake changed the way the municipality views hazards, disaster?

Has earthquake changed relationship between central government and municipality?

Has municipality's relationship changed with its residents after the earthquake?

How should government work with people

NBC?

People's expectations of the government post earthquake

Minimum conditions performance measures

What would you like the MFALD to do for you? to help prepare city for hazards?

Questions for the MFALD

Has earthquake changed the way MFALD views disaster and development

Minimum conditions performance measures (MCPM)

Capacity Building

Mainstreaming disaster

Community Resilience

Definition of a Disaster Resilient Community

Appendix G Consent Form

Thank you for kindly agreeing to be interviewed for my postgraduate research titled, 'Community resilience to earthquakes'. This research focuses on community resilience to earthquakes; from debate to practical application in urbanising settings of Nepal. The aim of the research is to address a gap in how resilience is understood in the urban and peri-urban context and to assess if resilience can be operationalised. Building the resilience of communities to disasters is being practiced; how to measure this is unclear. The definition of resilience will arise from interactions with the community, government and other key stakeholders such as NGOs and practitioners.

This postgraduate research is part of the *Earthquakes without Frontiers* project which brings together natural and social scientists from some UK universities working closely with local scientists, policy makers, and governmental and non-governmental organisations with the aim of increasing the resilience of populations exposed to earthquakes and related hazards across three case study regions: the Himalayan mountain front; North-East China; and Iran and Central Asia.

With your agreement, I would like to use the information that you have kindly shared with me today in academic and wider publications, and for lectures.

Please complete the following:

1. I am willing for you to use the interview material and for you to refer to the organisation that I represent by name* ☐
2. I am willing for you to use the interview material but would like to remain anonymous, with reference to my broad affiliation only e.g. 'senior government official'* ☐

*except in those instances when I have explicitly asked for my comments to be 'off the record'

Name of interviewee:

Name of researcher:

Signature:

Signature:

Date:

Date:

Information sheet for community member interviewees

Community Resilience to Earthquakes

From debates to practical application

My name is Hanna Ruszczyk and I am a postgraduate student in the Department of Geography at Durham University (UK). I would like to learn how people view their sources of strength, who and what do they depend on in a time of need. I would like to learn how individuals living in urban and peri urban areas (core wards and non core wards) understand components of resilience, which they consider to be most important and how this can be understood and supported in order to build resilience to an earthquake hazard. It is also important to understand what resources communities have control over and which resources are influenced by other stakeholders (such as the central government, municipality and also NGOs if they are working in the communities) in order to understand the linkages and relationships involved in building capacity to hazards.

Hanna Ruszczyk

Durham University

Department of Geography

Postgraduate student

h.a.ruszczyk@durham.ac.uk

November 2014

Information sheet for Government, Donor, INGO and NGO interviewees

Community Resilience to Earthquakes From debates to practical application

My name is Hanna Ruszczyk and I began my postgraduate research in the Department of Geography at Durham University (UK) in October 2013. I am conducting my research in conjunction with the Earthquakes without Frontiers project with support from NSET in Nepal. My postgraduate research aims to explore how resilience to earthquakes is understood in urban and peri urban areas. Urbanising areas are of particular interest to government, NGOs and others who are working to build disaster resilience. I also aim to assess if and how resilience can be operationalised into a set of indicators and best practices that might have wider application in other urban settings. I hope that the findings of the research will be useful to Flagship 4 of the NRRC and to the MoFALD in particular as they strive to refine their guidelines for engaging communities in disaster risk reduction.

An understanding of resilience and community resilience will arise from the fieldwork in Nepal. I am not pre-defining the term; I would like to find the definition of resilience through engagement with the government, practitioners and the communities, situating the communities at the centre of the discussion. It is critical to understand how urban and peri urban communities define components of resilience, which they consider to be most important and how this can be understood and assessed in order to support communities to build resilience to an earthquake hazard.

I will be conducting my fieldwork in Bharatpur. I will travel to Bharatpur over a series of trips, the first of which is in November – December 2014. I will return in the first months of 2015 for a second fieldwork research trip. I will conduct a dissemination trip to Nepal in the autumn of 2015 to share my findings with the government, donors, practitioners, communities and people I engaged with during this research project.

Hanna Ruszczyk
Durham University
Department of Geography
Postgraduate student

h.a.ruszczyk@durham.ac.uk

November 2014

Appendix H 23 key informants, description and location in city



Appendix I Codes hierarchy future, December 2015

Name	
ews	▼ topics from informants Ward 11 and Ward 4
	▼ social
	Social workers
	Identity
	status of women
	renters
	social capital
	The poor
	extended family.docx
	Culture and society
	Ethnic groups in Bharatpur
	kumal indigenous group
	▼ physical infrastructure
	p i
	roads
	▼ everyday risk, hazard, peace and security
	peace and security
	everyday risks
	hazards
	▼ community groups
	other groups
	Tole Level Organisations
	Women's groups
	Women's groups in detail
	Tole level organisations in detail
	▼ hope, safe Chitwan
	hope
	SAFE Chitwan, Bharatpur, it is not the Tarai
	▼ changes
	waves of newcomers, how got land
	changes in past 30 years, urbanisation
	value of the global
	Having a voice, being seen
	Sub Metropolitan City, urban planning and politics
copy	▼ government
	People who want local elections.docx
	Spoke of government
	Mapping, seeing, systems
	Role of politicians
	Misunderstanding, misreading municipal practices
	ways govt can communicate to people
	Constitution (and earthquake)
	▼ economic
	business climate, livelihoods
	Remittances, migration abroad
	▼ Earthquake and construction
	eq resistant construction OR safe houses
	Gorkha EQ, where were you and how INFO get

Appendix J Codes hierarchy everyday risks, February 2016

▼	EC 1 everyday individuals risk perceptions	11 February 2016 16:51	--	Folder
▶	bcipn	3 February 2016 15:06	--	Folder
	CBS 2012 poverty and access to facilities	5 February 2016 15:40	157 KB	PNG image
▼	EC 1 capitals fleshed out	3 February 2016 16:08	--	Folder
▼	economic	30 January 2016 14:56	--	Folder
	business climate, livelihoods	30 January 2016 14:56	114 KB	Word
	Remittances, migration abroad	30 January 2016 14:56	112 KB	Word
▼	environment, hazards	18 January 2016 15:29	--	Folder
	hazards	18 January 2016 15:29	116 KB	Word
▼	everyday risk	5 January 2016 15:29	--	Folder
	everyday risks	5 January 2016 13:12	116 KB	Word
▼	government	31 January 2016 21:51	--	Folder
	Constitution (and earthquake)	31 January 2016 21:51	108 KB	Word
	Misunderstanding, misreading municipal practices	5 January 2016 14:47	122 KB	Word
	People who want local elections.docx	25 January 2016 12:21	123 KB	Word
	Role of politicians	18 January 2016 15:47	96 KB	Word
	Spoke of government	30 January 2016 14:03	130 KB	Word
	ways govt can communicate to people	18 January 2016 15:48	106 KB	Word
▼	key theme everyday risk and future to be safe	13 January 2016 16:10	--	Folder
	Based on analysis	13 January 2016 15:49	112 KB	Word
▶	safe for the future, capitals and excel by others	5 January 2016 13:21	--	Folder
	Ward 4 and 11 table of...eep you safe for the future	5 January 2016 13:25	138 KB	Word
▼	physical infrastructure	12 January 2016 14:01	--	Folder
	p i	12 January 2016 13:55	137 KB	Word
	roads	12 January 2016 14:01	109 KB	Word
▼	social	11 February 2016 09:12	--	Folder
	Biharians The 'other'	25 January 2016 15:27	73 KB	Word
	Culture and society	30 January 2016 14:17	107 KB	Word
	Ethnic groups in Bharatpur	3 February 2016 15:46	99 KB	Word
	extended family	5 January 2016 15:41	120 KB	Word
	Identity	31 January 2016 21:24	104 KB	Word
	kumal indigenous group ec 2	5 January 2016 14:33	93 KB	Word
	renters	2 February 2016 12:48	110 KB	Word
	Slum dwellers	24 January 2016 11:47	116 KB	Word
	Social workers	11 February 2016 09:12	36 KB	Word
	status of women	30 January 2016 14:20	114 KB	Word
	The poor	5 January 2016 14:27	88 KB	Word
	Youth	27 January 2016 11:41	28 KB	Word
▼	key documents	5 February 2016 16:52	--	Folder
	EC 1 components	3 February 2016 17:52	67 KB	Word
	EC 1 The everyday and risks	5 February 2016 16:52	468 KB	Word
▶	my 22	11 February 2016 10:08	--	Folder
	My cast of characters	11 February 2016 16:45	141 KB	Word
▶	scales	3 February 2016 15:11	--	Folder
▶	the everyday and cast of characters	11 February 2016 11:34	--	Folder
▶	EC 2 the collective, the group, the community	11 February 2016 08:20	--	Folder

Appendix K My blogs post earthquake

<http://community.dur.ac.uk/geopad/nepal-earthquake-day-1/>

<http://community.dur.ac.uk/geopad/returning-home-from-nepal-by-hanna-ruszczyk/>

Day 1: Saturday 25/04/2015

The earthquake started at 11:56 am on the day of rest (Saturday), therefore there were not any vehicles traveling and shops closed and few people out in Bharatpur. My research assistant and I were walking on, new road, where the Indian trucks get serviced, where buses are made etc. It is a wide road near the river. I heard thunder? And the metal was shaking on the commercial building off the road. I looked to the other side and the same was happening with that building. People were looking at the sky. I asked P what he thought was going on. He said earthquake.

I felt faint and not stable on the ground, there was a yellow haze and it appeared as if waves coming from the ground and the ground was shaking horizontally. It last around a minute and a half. I swayed but did not fall.

People were and continue to be calm and smile 9 hours later. Everyone was outdoors for hours, I even conducted a focus group discussion with a women group outside of a school. After the earthquake, we just continued to our meeting! I think we were in shock. We met a home owner who we interviewed last trip and he wanted to know if we thought his house was safe. I felt only one tremor until 14:30 but People said there had been up to five.

There is no visible damage in Bharatpur. The roads intact, most buildings do not appear to have cracks, although one young man who we interviewed earlier this week said his rented flat had a cracked wall. There was one water pipe that was cracked/broken on the main highway. We were 60 km from the epicenter but thankfully we had minimal deaths. Lalitpur, where I did my fieldwork in Nov/Dec 2013 was heavily damaged in Kathmandu valley from what I can see on TV. We were there only 10 days earlier.

People were listening to FM radio and we watched Indian TV in a shop to see the devastation in Kathmandu. Nepali TV was not functioning 3 hours after earthquake.

Everyone was trying to use their mobiles so for the first hour the telecommunications network was not functioning. I could call my husband after 2 and a half hours. FM radio told people to stay outdoors for ten hours. Nepali TV started to work after 16:00.

We visited a social activist and his community to see if they were secure. We had tea and discussed earthquake, preparedness and response. They asked if I planned on changing my research to post disaster. There was much laughter for the earthquake lady, ...

I asked various people in ward 4 what they were doing when they felt the earthquake and people seemed to be well prepared (with the exception of the slum dwellers who had no clue how to respond). R explained to them what to do if there were after shocks. Duck, open space, calmly go outside.

We made our way back to the hotel around 17:00. While I was preparing a bag for the night (I did not want to be alone in my 1st floor room) a strong aftershock startled me and I jolted outside. The continuing aftershocks are jarring and regular enough to keep my stomach in a knot. (I have this image from a movie of the earth opening up and ...) The images on local and national TV are heart breaking. I have stopped watching. I am too involved. I handed out orange whistles that I had purchased as a gift for the municipality to the hotel staff, fellow Americans staying at the hotel and my RA and his 2 friends.

It is 1:00 am and I am going to nap soon.

I have been very surprised that the telecommunications functioned and Internet! It was a relief to make contact with my family and also to read the emails from Durham and K especially. Everyone responded in such an quick, timely, efficient, professional manner. How wonderful when the system works.

I hope this new day brings nothing interesting to report...

Day 2: Sunday 26/04/2015

It is 10:00 am, I slept on a couch in the restaurant. There were tremors at 3:00 and 5:00 this morning I went outdoors but they did not last very long. I am going to move to a bungalow that is more expensive but more secure.

A private TV station has caused panic in Kathmandu by saying another earthquake of the same magnitude of yesterday is expected at noon today. Whole Villages have disappeared

in the epicenter, people believe the total could be upward of 10,000. Relief efforts have started.

Bharatpur is calm, quiet. I hear from people with family in Kathmandu that the shocks are frequent and strong and people are getting into a panic. I am staying around hotel for today.

Night 2

It is 7:45 pm, dark and night two. I hope there is not much activity tonight. Last night was terrifying. I hope to sleep a bit tonight. I have moved to a safer room in the hotel. I stayed at the hotel most of the day and took a car ride late afternoon to see the city overall. There is no / minimal damage in Bharatpur, the shops are closed, people milling in the streets, camping outside. People are calm. We only saw 10 trucks buses on the main North-South highway at the intersection with the East-West highway. Road, no movement on the main highway.

Kathmandu seems to be a different reality. There are rumors spreading that the valley needs to be evacuated in preparation for a 9 mg earthquake. The private TV stations are spreading panic and announcing what time the next big one is expected. Honestly, they should be put in jail. I am so pleased I am not there. One of the people I am with has a wife and young child in Kathmandu. The main road from the West into the valley has been closed at times today due to rocks falling.

I had hoped that departing from Nepal via India was an option but it does not seem to be very realistic due to visas. I have no desire to leave this safe environment, just wanted to have a contingency plan. R and K have been great. I thought I should go interview today but I could not. We sort of just sat all day. There are after shocks from time to time and the constant wondering what if is tiring.

I forced myself to write a bit today. The rumors, the media hype and the images on TV (which I stayed away from today) just make everyone more fearful. I almost wonder if there is too much information available. Now I know that when I think the Earth is moving, it really is. We sort of feel like our heads are spinning, or fainting, the palms sweat. It is very odd. Some after shocks are subtle, the water moves in the bottle, but one today was massive and lasted 30 seconds. Sounds like the earth is angry. I can now

understand the folk tales. Also the bloody crows seem to be the only ones vocalizing their emotions.

If I had to sum up resilience to earthquake (or not) in a few words, it would be government action, media, the power of prayer, internet, mobile phones, preparedness, helplessness in the face of disaster, fear and willingness of people to support each other. You can see people's willingness to support each other.

Day 3: Monday 27/04/2015

We had great night. There was only very low grade shaking around 22:00 and at 3:45 the wife of R friend called and said the ground had been shaking for a longtime time very low grade in Kathmandu. Birds are chirping this morning so a comforting sound. I think they have been quiet since the earthquake. We are at hour 44 so things should be calming down. The first 48 hours are the most problematic, and the first 72.

Day 4: Tuesday 28/04/2015

Hour 68. No after shocks last night.

I am coming home. Yesterday, Monday, the Indian government relaxed entry procedures on the border crossings over land. This will allow me to travel home given the fact that Kathmandu is increasingly unlikely to be a way to exit Nepal. I am in the process of renting a car and will travel to Raxual, the border crossing tomorrow Wednesday. I will travel to Patna (where I conducted a scoping trip last) and on Friday evening I will fly from Patna to Delhi and onward home. It will be interesting to see how onerous the border crossing is, if the temporary procedures work and then driving to Patna and arriving in the dark.

Durham has been amazingly helpful during this process (K, A, N and those in the background)) and K has been a wonderful link. In the last 40 hours, I have communicated with R and K almost every few hours. Both have supported me beyond words. Thank you for the emails people have sent. I appreciated them.

Sunday, R and K tried to find out if it was possible for me to leave Nepal via India. By

19:00 it was clear it was not possible to get visas at the border crossing. This has just been a whirlwind that I have been tracking by the hour. Not day but hour. Hour 1, night-time Saturday, long night, hour 24 came, continuous shaking, evening, 2nd night we were all scared. The guys were getting tired and anxious so we rallied around and played with my Uno cards. M's wife called at 3:00 saying that the shaking was going on for a long time in Kathmandu. Morning came with the birds singing and we had not been forced to flee our room.

I visited the municipality yesterday to see what they were focusing on. It was very quiet, I spent 45 minutes with the Mayor. He was in good spirits because his city was spared the devastation of the catastrophic earthquake. They spent Sunday in the municipality answering questions that citizens might have. They had told people that the first 72 hours are the most dangerous. People stayed outside and slept outside for the first two nights. The municipality handed out tarpaulins in the designated four open spaces in the city (Ward 2, the college, and two others).

Yesterday when the 48th hour came, I could feel my stomach unclench a bit and my heart started to ache. Now I can think of the people who have lost their lives, their homes, and their entire communities. What about the injured – surrounded by devastation. The children? I was shown what the villages that disappeared would have looked like. Getting access to these villages where the last kms are on terrain accessible by foot only is insane.

My counterpart talked about his earthquake experience with boulders crashing around him. S was traveling to Kathmandu for an important meeting about the national building code when boulders crashed onto the main East-West highway of the country (read mountainous road) and destroyed a 4×4. His car was behind this 4×4 and rocks were falling behind him. He did not understand what was happening. Two employees from the hotel were in Kathmandu on Saturday and both changed plans at the last minute and avoided death amongst the 400 or so at the tower. They are beyond stunned.

S and I went to a hotel for a tea. There was a woman in tears from Finland, she could not function and think how to get home. Two young college graduates were mulling over how to get home to their respective countries. One had no money and no passport. They were not much older than my son.

When the Iranian geologists at the conference a few weeks earlier in Kathmandu mentioned trauma after earthquakes it took me by surprise. Now I know what they are referring to in a small way. I will never think of thunder and metal clanking in the same way. A loud sound forces adrenalin through my system. Water bottles and my black backpack with my passport, medicines, money. My whistle and head torch and my two phones.

It is fascinating to witness the various stages that come after the hazard. Saturday was shock and everyone continued with their organized activities (I conducted a focus group and went to scheduled interview), the second day (24 hours later) people were numb and nervous and were processing what had happened to them the day before and continued to happen with the too regular after shocks. Monday, 48 hours later, people are emotional / tearful and needed to talk about where they were when it happened or “attacked”.

Some are ready to get back to their everyday lives. The waiters were watching wrestling last night rather than the nonstop news of the devastation. A businessman from the far west contacted M and asked where his axil for the 4-wheel drive was. M explained that due to the earthquake, nothing was coming out of Kathmandu. The business man was not impressed.

I guess you need to be in it to understand how disruptive an earthquake can be. I wonder how long the memory of the earthquake will linger in the minds and hearts of people and especially the government. What will the lessons be? Will we learn them? What will the comparison be to Haiti. I hope the international aid community will not repeat the mistakes of Haiti.

Here in Bharatpur, the streets have been quiet with minimal transport, a precious few buses and no trucks on the road. The shops are closed, children at home for at least 5 days. The hospital two blocks away the Chitwan medical center has received many injured from Gorkha (hilly, mountainous area where the earthquake was very powerful, close to the epicenter). My hotel, the Global, will be a hub for humanitarian relief for Gorkha because we are so close to the epicentre, airport across the street and it is only 62 km from Bharatpur. The international doctors and supplies start arriving today.

People say the government is focused on Kathmandu and not on the epicenter. Today I heard (speculation) that the death toll may ultimate rise to 15,000 – 20,000. Talk is of the ‘missing’. I had thought 10 was high, this would be more than the 1934 earthquake.

The western road to Kathmandu is clogged with traffic in both directions. The road is a bit dodgy was well. Two people tried unsuccessfully yesterday to leave Bharatpur to get their families out of Kathmandu and both returned to Bharatpur. They tried in the morning and again in the afternoon. The highway is jammed.

Anyway, no aftershocks yesterday and last night was calm. I need to find the car today and say goodbye to the people I have spent the last 72 hours with and those who I will leave behind. I can escape; they can not. It is very hard.

Day 5 Wednesday 29/04/2015 and Day 6 Thursday 30/04/2015. My last email about my experience.

I arrived in Patna, India after an uneventful but long 12-hour journey yesterday (Wednesday). Three hours to the border, two hours at the border (the Indian officials were taking their time) and then almost seven hours from R to Patna in Bihar State (two and half hours on unpaved pot hole ridden roads). We arrived in the dark, after traffic jams, witnessing three car accidents, two-road accidents induced brawls, and one injured person who had been hit by a vehicle and his bicycle was broken. It sounds like fiction.

I was so fortunate that R, my RA, crossed the border with me and helped me with the procedures and helped me find my taxi. I would have struggled on my own. I expected to find an everyday chaotic scene at the border and it did not disappoint. R, the border crossing, is closed for foreigners; Nepali and Indian people cross freely and easily. This porous border allows for friendly relationships between the two nations, including marrying. (The Terai inhabitants have generally had more affinity with India than with Kathmandu, this has been a lingering source of worry for the national government of Nepal).

Since the Indian government (48 hours after Earthquake) relaxed border restrictions; on Monday evening, Durham and I agreed I would evacuate from Nepal on Wednesday. I

needed to arrange a car and driver and I wanted to understand the situation at the border. The trip was very smooth and I am so grateful for all the support and organization of logistics involved in getting me to Patna. R, organized the trip for me, UNICEF gave me information about the border crossing and BSDMA kept in contact with me during the journey and I felt I was in safe hands. I begin my final homeward bound journey on Friday night. Flights from Patna– Delhi-Dubai- Newcastle. (there were no flights available on Thursday).

On Wednesday, I left the Global Hotel before eight am after meeting with S from the municipality for an hour. It was so sad listening to him speak of the lack of relief efforts to the epicenter due to the terrain and landslides. He has(d) extended family there. From Bharatpur, a group of youths who are familiar with the mountainous terrain and who are obviously physically able to handle the climbing will go and investigate the reality of the villages, come back to report and relief will start. The question is how? The terrain is impassable, it has been days already, and in six weeks monsoon season will start with the increased possibly of landslides? It is so difficult to comprehend. I feel the criticisms of the government's response to the epicenter difficult to accept. 'Something' must be done, but the topography limits intervention at the moment. The critical question is will the central government focus on rebuilding the capital and its 2-3 million people to the complete detriment of the rest of the country that house 26 million of its inhabitants. Cities in Terai already worry.

On Day 5 (Wednesday), hundreds of buses were beginning to transport people out of Kathmandu Valley. (There was a shortage of buses on Monday and Tuesday partly because the ethnic group that drives public buses in KV had left the valley to try to rescue their extended family in the epicenter). This effort to move people out of the valley is sensible to decrease the pressure on the valley's diminishing resources. The National Society for Earthquake Technology has issued an international request for engineers who could come and assist in assessing the structural damage to the thousands of buildings in the devastated Kathmandu Valley. People are scared of their own homes at the moment. Any volunteers?? If so, write to me and I will get you in contact with our wonderful NSET colleagues.

The terrible rains yesterday morning had everyone whispering the words, "landslides,

landslides”. The fear is land slides on the East West Highway leaving KV from the west. There were two colleagues who were waiting for their children to be on some of those buses yesterday headed out of the valley. The fear just continues. The trauma, the lack of sleep, inability to eat, the spinning head. I know we were all functioning at diminished capacity.

I wonder how the national government, the UN, the relief coordinators, colleagues at the National Society for Earthquake Technology are coping. I hope and pray Nepal and the response to the earthquake in Nepal will be compared positively to the response in Haiti (5th anniversary of Haiti’s earthquake was in January this year). (Death toll was 250,000, the failure of the international aid community to properly respond in a coordinated fashion was stunning, and the knock on effects of the disaster are still with Haiti).

Nationally, everyone is trying to do what he or she can. Throughout the country, people are collecting shelter items and clothes and will be sending them to the epicenter (Bharatpur as a staging ground since it is so close to the epicenter). For example, the Lions Club nationally has asked all branches to collect money, no matter how small, and send it to the headquarters. Some want to contribute to the honest Prime Minister’s relief fund, others are still asking what is the most “authentic” way of contributing. The hotels in Bharatpur are sorting out food, blankets and water to be sent.

After my arrival in Patna at 19:30, I tidied myself up and went to dinner at the home of the executive director of the Bihar State Disaster Management Authority (responsible for the safety of over 100 million people!). We had just seen each other at the ESRC / NERC funded Earthquake without Frontiers nine country conference of natural and social scientists in Kathmandu. Unbelievable timing.

Anil described the damage of the Earthquake in Bihar, India, 80 deaths and the damage to the structural integrity of an unknown number of buildings (I imagine it will be less than in Kathmandu Valley though). The BSDMA has already been training engineers and architects on Tuesday and Wednesday to assess damage in the hardest hit northern districts. The procedures to decide how to address the most structurally damaged needs to be worked out. In Bihar, there was mass panic according to BSDMA. I do not think this was the case across the board in Nepal. In KV, there was panic but it calmed down

relatively quickly. In Bharatpur, people were calm and collected on Saturday and continued in that manner in the days afterwards even through the horrible after shocks. In Bihar, the government asked people to return to their homes by the second night to avoid issues with looting, in Nepal people were advised to stay outside for the first two nights (the focus on the first 72 hours).

The Bihar government has offered free food and shelter to anyone from Nepal who would like to come to Bihar. At 23:00, I was taken to the Red Cross office in Patna and I saw the loading of several relief trucks with family packs (a complete set of items that could be used by 3 generations of a family), blankets and of course water. This relief effort for Nepal from Bihar started two days ago and will now pick up speed. The Bihar government is very keen to support Nepal and will provide whatever support is needed. Anil asked me to share my experience with the BSDMA staff and the international aid community this afternoon at a scheduled meeting they were organizing. I am not certain how coherent I will be.

In the last days, I have repeatedly been told that I am lucky or that I brought luck to Bharatpur (which escaped damage) since I am ‘studying earthquakes’ and now I have experienced one during my PhD. In the back of my mind, I wonder what would have been people’s response to me if Bharatpur had been damaged. It may not have been so positive. I wonder if they would have thought I had induced it. [During my masters by research fieldwork in Lalitpur and Kirtipur in the KV, people did not want to speak of earthquakes for fear it would come to fruition]. I was a bit hesitant on Saturday, walking through Ward 4 (before we knew there was no damage); where people knew I had been asking questions about everyday risks and hazards especially earthquake awareness and preparation. I was already known by some as ‘the earthquake lady’.

I do not know why I participated in the ‘great earthquake’ (as the media is calling in in Nepal). Originally, I had envisioned conducting a comparison between KV and Patna. This changed after the progression panel that I had last year (they thought I was being too ambitious with two very different fieldwork sites in short fieldwork trips). I had a scheduled fieldwork trip to Bharatpur for March / April but my husband had to travel to Central Asia in March so my fieldwork trip was delayed to April / May. Bharatpur should

have been damaged by the earthquake, it is closer than Kathmandu to the epicenter. I did not collect the data I had hoped for during this trip and now I am going home early. My PhD will need to be changed. It is all a bit much. The question is what will I do with my research now.... (and I have no clue). I need to meet with my supervisors next week.

First, I need to get back home and see my family and friends. My husband has told me our children are more concerned about which episode of Top Gear to watch; that in itself is comforting. One less thing to worry about.